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ABSTRACT

This document contains seven issues of an information letter from the International Project on Technical and Vocational Education (UNEVOC). Issue 1 includes an overview of the initial phase of the UNEVOC Project, together with a description of its background, structure and mechanism, and program areas. Issue 2 reports UNEVOC activities carried out during 1993-94: progress on establishment of an international network of leading national and regional institutions in technical and vocational education and information on regional expert meetings. Issue 3 offers a summary of the UNEVOC International Advisory Committee (Second Session) and reports on regional activities. Issue 4 introduces a regional overview of case studies on the role of technical and vocational education in the educational system undertaken in Asia and the Pacific and provides a summary of the Swedish national study. Issue 5 reports on promotion of the equal access of girls and women to technical and vocational education and on facilitating cooperation between educational institutions and enterprises in technical and vocational education. Issue 6 reports on achievements of the UNEVOC Project during 1995 and includes a detailed report of the most recent international Symposium on Future Trends in Continuing Technical and Vocational Education and an analytical paper entitled "The Future of Vocational Training." Issue 7 presents the UNEVOC Work Plan for 1996-97. (YLB)

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UNEVOC INFO

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September 1994-April 1996

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ABOUT UNEVOC INFO

This is the first issue of UNEVOC INFO, an information letter issued quarterly by UNESCO within the framework of the International Project on Technical and Vocational Education (UNEVOC).

UNEVOC is an international project dedicated to developing and improving technical and vocational education in UNESCO's Member States. It will focus on information exchange, networking and other methods of international co-operation. The project has received extensive support from many Member States since it was launched in 1992.

UNEVOC INFO will report on activities carried out within the framework of UNEVOC for the benefit of all those interested in UNEVOC as a mechanism for information flow for the advancement and development of technical and vocational education through international co-operation. The information letter is intended for those responsible for the planning, administration, teacher training, curriculum development and the preparation of teaching materials in the field of technical and vocational education, as well as for teachers in this field.

In addition to specific UNEVOC activities (such as technical working group meetings, training seminars, case and comparative studies at the national, sub-regional, regional and international levels, and technical co-operation projects), information from other sources on innovations in technical and vocational education which may be of wide international interest will also be reported.

This first issue includes an overview of the initial phase of the UNEVOC Project, together with a description of its background, structure and mechanism and programme areas. Activities implemented in 1992-1993 as well as those planned for 1994-1995 are described in detail.

In future issues, UNEVOC INFO will summarize results of programme activities which have been implemented. Profiles of selected institutions forming part of the UNEVOC network will be featured and information on recent publications and other matters of interest to the UNEVOC community will be included.

I would like to take this opportunity to invite readers to contribute information related to the main objectives of the UNEVOC Project for possible inclusion in this new information letter.

I hope that UNEVOC INFO will be of benefit to the international community concerned with matters relating to technical and vocational education. Your suggestions and/or comments will be greatly appreciated.

Colin N. Power
Assistant Director-General for Education
UNESCO

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WHAT IS UNEVOC ?

The International Project on Technical and Vocational Education (UNEVOC) is a project of the United Nations Educational, Scientific and Cultural Organization (UNESCO). Its purpose is to contribute to the development and improvement of technical and vocational education in Member States.

Based on a decision taken at the twenty-sixth session of the General Conference of UNESCO in 1991, UNEVOC was launched in 1992.

Alfred Hardenacke, Director of Technical and Vocational Education at the Germany Federal Ministry of Education and Science, hands the key of the Berlin premises over to Colin Power, Assistant Director-General for Education of UNESCO

Background

The idea to launch a comprehensive project on technical and vocational education within UNESCO dates back to 1987. That year, UNESCO held its first International Congress for the Development and Improvement of Technical and Vocational Education in Berlin, Germany. Strong support was shown for the suggestion that a mechanism be established for the international exchange of information on technical and vocational education. It was proposed that UNESCO support the establishment of an international centre for research and development in technical and vocational education.

The General Conference of UNESCO at its twenty-fifth session in 1989, took two important decisions related to technical and vocational education:

- The General Conference adopted the *Convention on Technical and Vocational Education*. This standard-setting instrument provides a coherent set of concepts and guidelines for the development of technical and vocational education in Member States, with particular regard to assuming public responsibility for framing policies and defining strategies of technical and vocational education, considered to be an integral part of the education system and for the promotion of international co-operation.
- Furthermore, the General Conference invited the Director-General of UNESCO to carry out a feasibility study on the establishment of an International Centre for Technical and Vocational Education.

This feasibility study recommended that UNESCO's activities in technical and vocational education should concentrate on matters of technical and vocational education as a component of the overall education system. Based on that feasibility study, which was completed in early 1991, the General Conference of UNESCO decided, at its twenty-sixth session in 1991, to launch the first phase of a UNESCO International Project on Technical and Vocational Education (UNEVOC).

Programme areas

In accordance with that decision, UNEVOC was designed:

- to contribute to the *development of systems* of technical and vocational education;
- to promote *infrastructures* in research, development and planning; and
- to facilitate *information and communication* in these fields.

The first phase of UNEVOC covers the period until the twenty-eighth session of the General Conference of UNESCO (late 1995).

Structures and mechanisms

UNEVOC is carried out under the responsibility of the Education Sector of UNESCO, specifically the Section for Technical and Vocational Education, at its Headquarters in Paris.

An International Advisory Committee has been established by UNESCO to advise the organization on the preparation and implementation of the UNEVOC programme.

Many activities within UNEVOC are being executed on a regional basis and UNESCO's Regional Offices play an important role in the implementation of the project:

Africa: Regional Office for Education in Africa (BREDA)
Arab States: Regional Office for Education in the Arab States (UNEDBAS)
Asia and the Pacific: Principal Regional Office for Asia and the Pacific (PROAP)
Latin America and the Caribbean : Regional Office for Education in Latin America and the Caribbean (OREALC)

Following the decision on UNEVOC taken by the General Conference in 1991, the Government of the Federal Republic of Germany offered to host an Implementation Unit in Berlin, in the immediate vicinity of the *Bundesinstitut für Berufsbildung (BIBB) (German Federal Institute for Vocational Training)* and close to the *European Centre for the Development of Vocational Training (CEDEFOP)* of the European Union.

On 17 July 1992, UNESCO and the Government of the Federal Republic of Germany concluded an agreement on UNEVOC.

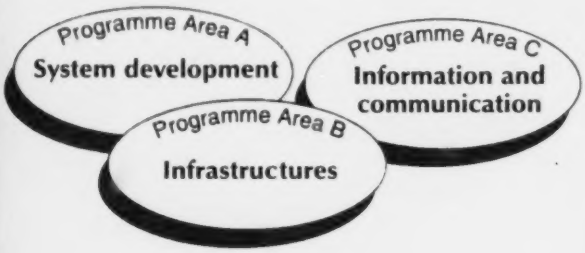
In this agreement, the Government of the Federal Republic of Germany offered to double UNESCO's budgetary input into the project. In addition, UNESCO and Germany agreed to establish a project implementation unit in Berlin. The Senate (Government) of Berlin has generously provided premises for this Unit and Germany also provided the budget for office furniture and data processing and telecommunication facilities as well as other initial equipment.

The Berlin Unit was officially opened on the occasion of the first session of the International Advisory Committee, September 1993. The Berlin Unit assists the overall planning of UNEVOC and is responsible for the implementation of certain activities specified in the UNEVOC programme.

THE PROGRAMME FOR 1994-1995

According to a decision taken by UNESCO's Member States in 1991 and reaffirmed last November, UNEVOC will work in *three programme areas*.

- *Programme Area A* deals with the international exchange of experience and the promotion of studies on policy issues. It is devoted to *system development* in technical and vocational education.
- *Programme Area B* is devoted to strengthening national research and development capabilities, that is to the development of *infrastructures*.
- *Programme Area C* concerns access to data bases and documentation in its broadest sense, in other words, with *information and communication*.



Programme areas of UNEVOC

System development

The basic concept behind **Programme Area A** is to enhance the role and status of technical and vocational education within national education systems.

UNESCO held a *consultation* in 1993 with experts from different regions of the world in order to identify some of the factors which determine the role and status of technical and vocational education. The results are summarized on page 5. Currently, a series of case studies are being prepared on the relevance of these factors within given national education systems.

In order to promote *co-operation between educational authorities and the world of work* in technical and vocational education, studies will be conducted in selected countries on existing policies and legislation which enhance such co-operation.

As soon as these case studies have been completed, the experience gathered will be made available to all interested countries and presented to policy-makers through *regional symposia*.

Finally, a survey will be carried out on the relevance of *vocational information and guidance for the equal access of girls and women* to technical and vocational education. This survey is intended to contribute to the Fourth World Conference on Women to be held in Beijing in September 1995.

Infrastructures

Programme Area B is devoted to strengthening national research and development capabilities, that is to the development of *infrastructures*. In 1993, UNESCO held a workshop which convened experts from all the regions of the world. Participants compared different *methods of development* of vocational curricula. The results, which are currently being evaluated in the regions are summarized on page 6. Certain follow-up activities have been initiated.

Special emphasis is being placed on the process of *international transfer and adaptation of existing curricula*. Differences in applied technologies, in norms, in legislation, in teacher training, etc. have to be taken into account when curricula are to be adapted to a new environment. UNESCO will facilitate the documenting of methods applied and experience gathered in the course of such curriculum adaptation.

Co-operation between educational institutions and enterprises is needed not only at the system level, but also at the training level. The work place provides a valuable environment for systematic vocational learning. But how can this potential be utilized for the improvement of training? UNESCO will initiate a series of studies on mechanisms for co-operation between educational institutions and enterprises, and make the results available to the Member States.

With the support of a partner institution in an industrialized country, a seminar for key personnel is scheduled for 1995. It will address the modalities of co-operation between educational institutions and enterprises.

Finally, UNESCO will take steps to identify its future role in

the promotion of non-formal technical and vocational education. A survey will be prepared on the activities of various Specialized Agencies of the United Nations system in this field. That survey will be used as a basis for consultation with these agencies.

Information and communication

Programme Area C deals with access to data bases and documentation in its broadest sense. This concept includes in particular the development of information and communication structures among specialized institutions. The programme will be devoted to enriching the flow of information between specialized institutions in the Member States, as well as increasing the transparency of information and enhancing access to data bases and documentation. UNEVOC will not compete with specialized documentation centres, but rather will assist Member States in efficiently using existing data and documentation.

Currently a *directory of leading national and regional institutions* active in research, development and planning in technical and vocational education is being prepared. The next issue of *UNEVOC INFO* will go into more detail about this activity.

The publication of *UNEVOC INFO*, which is produced quarterly in English and French, is one of the activities under Programme Area C.

Some technical documents dealing with specific topics in technical and vocational education will be prepared and disseminated.

INTERNATIONAL ADVISORY COMMITTEE

An International Advisory Committee has been established for UNEVOC. It is responsible for advising UNESCO on the preparation and implementation of the UNEVOC programme. The International Advisory Committee is composed of twelve members from different regions of the world who serve in their personal capacity.

The International Advisory Committee held its first session on the premises of the UNEVOC Implementation Unit in Berlin, 20 to 22 September 1993. After thorough discussion, the Committee recommended that the activities of UNEVOC be concentrated in the following three major areas:

- improving the attractiveness and status of technical and vocational education within the education system;
- fostering links between technical and vocational education and industry and the labour market;
- the development of technical and vocational education systems.

It was generally agreed that the three programme areas decided upon by the UNESCO General Conference in 1991 formed a suitable framework for the UNEVOC Project.

The Committee also adopted the following recommendations:

Recommendations to the Director-General of UNESCO

1. Because of the relatively low priority given in many Member States, technical and vocational education systems cannot develop sufficiently to meet the pressing needs of their economic, social and human resources development. The International Advisory Committee recommends that UNESCO's Draft Programme and Budget for 1994-1995 should take greater account of this deficiency and provide an appropriate level of support.

The International Advisory Committee therefore deems it indispensable that:

- the General Conference give the highest possible priority to technical and vocational education in the coming decade;
- UNESCO's programme on technical and vocational education be retained as a separate sub-programme as is the case in the present 1992-1993 biennium;
- allocations from the regular budget for technical and vocational education be increased in order to allow the UNEVOC Project to be undertaken as recommended by the International Advisory Committee;
- the participation of other United Nations agencies, in particular the International Labour Organisation, in the implementation of the UNEVOC Project, be promoted in co-operation with other regional and international organizations engaged in the development of technical and vocational education;
- Member States, as well as donor agencies, be invited to take an active part in promoting the UNEVOC Project;
- Member States be advised to have appropriate persons representing technical and vocational education in their National Commissions for UNESCO; and
- consideration be given to adding Spanish to the two working languages of the UNEVOC Project.

2. The International Advisory Committee invites the Director-General to submit this report and recommendations on the UNEVOC Project to the UNESCO General Conference at its twenty-seventh session in October/November 1993.

Copies of the Final Report of the Committee's first session (in English or French) can be obtained from the Section for Technical and Vocational Education, UNESCO Paris.

UNEVOC CENTRES

One of the activities under the UNEVOC programme is the establishment of an international network of leading national and regional institutions active in planning, research and development in the field of technical and vocational education. Member States have been invited through their respective National Commissions for UNESCO to establish a national **UNEVOC Centre**, and eventually one or more **UNEVOC Associate Centres.**

UNEVOC Centres will be established for the purpose of encouraging the development of technical and vocational education mainly through the international exchange of ideas and experiences and the promotion of studies on policy issues.

In principle, there should be one **UNEVOC Centre** established in each country, which will act as the national focal point for the Network. In very exceptional circumstances additional institutes may be considered as **UNEVOC Centres**, at the special request of the National Commission for UNESCO.

The responsibilities of **UNEVOC Centres** will include the following:

- develop and lead a national network;
- ensure that expertise is shared among international network members;
- ensure that information flows to and from UNESCO and UNEVOC centres;
- provide research as requested by the UNESCO Secretariat;
- contribute to UNEVOC publications and data bases;
- update the directory of UNEVOC institutions.

Where appropriate, the **UNEVOC Centre** may encourage the establishment of a limited number of **UNEVOC Associate Centres** within the country. The **UNEVOC Associate Centres** should communicate with the Network through the **UNEVOC Centre** itself. All these centres will be listed in the *UNEVOC Directory* which will be compiled and disseminated by UNESCO.

It is expected that **UNEVOC Centres** will maintain a significant level of activity. To this end, the respective UNESCO National Commission should review the performance of the **UNEVOC Centre** on a regular basis, for instance every two years. Since networking for the purpose of enhancing technical and vocational education is essential, other international or regional institutions with similar purposes will be encouraged to contribute to the UNEVOC network.

WORLDWIDE ACTIVITIES

Participants at the International Consultation Meeting on the Role of Technical and Vocational Education in Educational Systems, Turin, Italy, June 1993

The role of technical and vocational education in educational systems

An International Consultation Meeting on the Role of Technical and Vocational Education in Educational Systems held at the International Training Centre of the International Labour Organisation (ILO) in Turin, Italy (14-18 June 1993) marked the starting point of activities in Programme Area A of UNEVOC. The main objectives of the meeting were:

- to identify major issues and priorities in the formulation of technical and vocational education policies;
- to identify factors that determine the role of technical and vocational education in education systems;
- to prepare guidelines for the case-studies on the relevance of these factors in national education systems. Such case-studies are currently being carried out under Programme Area A of the UNEVOC Project.

Country reports were presented by participants from Australia, France, Germany, Hungary, Italy, the Republic of Korea, Kenya and Nigeria.
Participants identified and extensively discussed a number of factors which they deemed important to the relevance of technical and vocational education in education systems:

1. Linkage between technical and vocational education and the world of work - several approaches were identified:
- to combine the theoretical education provided in schools with the practical training provided in the world of work;
- to solicit the involvement and active participation of enterprises in the training process, permitting training at the work place in actual working conditions;
- the involvement of all those concerned in the planning and development of curricula in order to meet the needs of the labour market.

2. An increase in the social status of technical and vocational education through:
- improved employment opportunities and information on current labour market needs and data;
- further development of social status, public image and mobility, and further career development for graduates.

3. The inculcation of entrepreneurial skills
- efforts should be made to promote self-employment and develop entrepreneurship, particularly in the small and medium enterprises;
- management, planning, budgeting, marketing etc. should be included in technical and vocational education curricula.

4. Qualification of teachers and instructors
- the recruitment of teachers from industry should be encouraged;
- practical-skills training should be incorporated into teacher education.

5. Articulation between technical and vocational education and general and higher education
- technical and vocational education should no longer be regarded as an isolated educational process but rather seen as an integral part of the education system and could, when necessary, lead to higher education;
- horizontal and vertical articulation between technical and vocational education and other elements of the education system should be established.

6. Economic factors
- both the public and the private sector should contribute to technical and vocational education;
- an environment should be created to encourage industry to provide additional financial support to technical and vocational education;
- the employment sector should share the financial burden of technical and vocational education;
- institutions of technical and vocational education should be encouraged to undertake income-generating activities.

7. Vocational guidance
- not only students, but also parents and employers should be made more aware of the career potential for technical and vocational education.

For more information, please ask for a copy of the Final Report of the meeting from the Section for Technical and Vocational Education, UNESCO Paris. This report is available in both English and French.

Curriculum development in technical and vocational education

An International Workshop on Curriculum Development in Technical and Vocational Education was held at the International Training Centre of the International Labour Organisation (ILO) in Turin (30 August to 3 September 1993). The event was part of Programme Area B of UNEVOC, which aims at the development of national capabilities for research and development in technical and vocational education.

Participants at the International Workshop on Curriculum Development in Technical and Vocational Education, Turin, August 1993

Its aims and objectives were:
- to review and analyze the existing practices in the design, implementation and evaluation of curricula in technical and vocational education;
- to facilitate the exchange of experiences among the participating countries;
- to identify some common trends and successful practices which will be disseminated to other countries participating in UNEVOC.

Experts from the Czech Republic, Denmark, Germany, Greece, Japan, Mexico, Uganda and the United Republic of Tanzania attended the workshop. They presented their knowledge and experience in curriculum development and implementation in respect of their own national systems.

As a result of the discussions of the different models and based on the synthesis of the country papers, major issues were raised with a view towards optimising the delivery in technical and vocational education systems, including the following:
- considerations of national socio-economic development and technological advances;
- relevance of curricula to competency-based technical and vocational education;

- feedback from implementation and evaluation;
- quality of teachers and instructors;
- financial resources for development and delivery of curricula;
- legislation with regard to curricula in technical and vocational education.

In group work, guidelines were identified and future strategies and methodologies for curriculum design and experimentation at regional levels were drawn up. The results were presented and discussed in plenary sessions. The summary covers a wide range of recommendations including:

- there should be a legal basis for co-operation between social partners and governments;
- the occupation profile and curriculum framework should cover a list of competencies, standards and work attitudes; they should also specify the level of training, the duration, means of assessment and certification;
- staff exchanges between enterprises and educational institutions should be encouraged and promoted;
- since the trainee is an important aspect of curriculum delivery, career and vocational guidance should be provided along with alternatives to make one's involvement in technical and vocational education both interesting and beneficial;
- certification in technical and vocational education should be well organized; on the country level, bodies responsible for advice on assessment and examination standards should be established;
- a network comprised of national training institutes and those involved in curriculum development and implementation should be established in each country. This network should interact with other national, as well as with international networks.

The workshop deliberated on the role that UNEVOC should play in developing curriculum and assisting various nations to undertake this activity to meet the national training needs. Taking into account the needs and availability of resources in the developing countries, the Workshop recommended that emphasis should be placed on:

- curriculum development methodologies which include local socio-economic considerations, labour market information analysis, training courses, preparation of teaching materials and equipment, and appropriate teacher training;
- training of curriculum developers at both local and national levels. These trained experts may play a key role in their own country's curriculum development in technical and vocational education in the future.

The participants strongly felt that it would be far more significant for the developing countries to assist them in the improvement of curriculum design rather than just provide them with some ready-made prototype curricula.
It was suggested that UNESCO should organize regional seminars in the coming years in order to train national curriculum developers with new approaches. During this process, an open prototype curriculum on a selected subject could be formulated as an example.
For more information, you can obtain a copy of the Final Report of this workshop from the Section for Technical and Vocational Education, UNESCO Paris. This report is available in both English and French.

FROM THE REGIONS

Regional expert meetings discuss implementation of UNEVOC

Four regional UNEVOC expert meetings (Nairobi Kenya, Montevideo Uruguay, Adelaide Australia, Manama State of Bahrain) were held in late 1993 and early 1994 to initiate UNEVOC activities in the regions. Brief reports of these meetings are foreseen for the next issue of *UNEVOC INFO*.

Asia and the Pacific: Round Table on Vocational Education

At the sixth Regional Conference of Ministers of Education and those Responsible for Economic Planning in Asia and the Pacific (MINEDAP VI) held in Kuala Lumpur, Malaysia in June 1993, Australia organized a *Round Table on Vocational Education*. The following summary was provided by UNESCO Principal Regional Office for Education in Asia and the Pacific (PROAP):

"There were four keynote presentations:

1. An overview of the development of technical and vocational education in the region by PROAP;

2. Recent key developments in Australia's training reforms, by Dr. McGaur, University of Tasmania, Hobart, Australia;

3. An overview of vocational and professional education in Viet Nam, by Professor Pham Min Hak, First Vice-Minister for Education, Viet Nam;

4. Importance of inculcating the work ethic and linkage of economic growth to the expansion of upper secondary schools, by Mr. Fumio Isoda, Ministry of Education, Science and Culture, Japan.

The presentations highlighted the essential links between technical and vocational education, and social and economic development, the convergence between general education and technical and vocational education, and the need to foster and maintain stronger links between the rapidly changing industry and education to ensure proper linkage between learning and the work place.

Adjusting the education system to the rapidly changing needs of society, raising the status of technical and vocational

education and viewing education as an investment, rather than as an expenditure and as a motivating force for economic and social development were also emphasised. It was particularly underlined that the abundant human resources of the region can become the greatest resource only through proper attention to training and development.

The round table concluded with an appeal for regional co-operation and exchange which is central to UNESCO's mission in developing policies and materials, so that the Member States can both assist and benefit from the numerous strategies in technical and vocational education. The round table reiterated that technical and vocational education must remain firmly on UNESCO's agenda in Asia and the Pacific particularly UNEVOC so that it can continue to assist the region in responding to the challenges of the twenty-first century.

The MINEDAP VI Conference *recommends* that UNESCO encourage the Member States to:

- promote stronger links between general education and technical vocational education, and between technical vocational education and industry, agriculture and other fields; both within each country and across the region in application of the Revised Recommendation concerning Technical and Vocational Education and the Convention on Technical and Vocational Education;
- promote the mutual recognition of qualifications in co-operation with industry;
- support the co-operative development of curricula and learning materials in technical and vocational education subjects;
- support the co-operative development of curricula which links science, humanities and cultural and traditional values to the world of work in *each Member State*;
- develop appropriate credit transfer, twinning arrangements, articulation and recognition procedures within and outside the region;
- exploit open learning approaches to deliver TVE programmes in areas to which access is currently difficult.

The Conference *further recommends* that Major Programme Area I of UNESCO continue to accord a high priority and appropriate resources to education for the world of work and technical and vocational education in general, and to UNEVOC in particular, with a view to:

- effectively mobilizing APEID, its associated centres, and the technical and vocational unit at PROAP for programme co-ordination to assist institutions, organizations and statutory bodies involved in technical and vocational education;
- supporting co-operative regional projects to develop technical and vocational education programmes which integrate school and work experiences in the curriculum;
- developing co-operative regional projects to promote learning for the work place and, in conjunction with the Associated Centres network, support the UNEVOC project within the region".

■

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EDITORIAL

This issue of UNEVOC INFO continues to report UNEVOC activities carried out during 1993-1994.

As an important component of UNEVOC projects, an international network of leading national and regional institutions in technical and vocational education is being established. We report the progress of this task in this issue.

As briefly mentioned in the last issue of UNEVOC INFO, regional UNEVOC expert meetings were organized in Africa, Arab States, Asia/Pacific and Latin America/Caribbean. In this issue you will find detailed information on these meetings.

Other important events related to UNEVOC and to technical and vocational education in general are also covered for our readers' interest.

Facilitating the exchange of information and communication is one of UNEVOC's major objectives. Communication means interchange. The editors of UNEVOC INFO are looking forward not only to keeping you informed about UNEVOC but also to communicating with you. Letters to the editor are always welcome, contributions even more.

UNEVOC INFO, as UNEVOC itself, is still young. Let us help it grow up. As it grows, it will assist you to develop and improve technical and vocational education in your country.

UNEVOC NETWORKING

One of the major activities of UNEVOC project is the establishment of an international network of leading national and regional institutions active in planning, research and development in the field of technical and vocational education. This will be achieved through the establishment of a national UNEVOC Centre and eventually one or more UNEVOC Associate Centres in each participating Member State.

All of UNESCO's Member States have been invited, through their National Commissions for UNESCO, to nominate UNEVOC Centres and, if they wish so, UNEVOC Associate Centres. As of 31 October 1994, some **86** Member States had responded to UNESCO Secretariat's request and more than 100 institutions from these countries have been nominated to participate in the UNEVOC network. The information concerning these institutions received by UNESCO have been computerized by the UNEVOC Implementation Unit. A new form filled with this information was recently sent back to the participating Member States for confirmation. Upon receipt of the confirmed and updated information, UNESCO will officially approve these UNEVOC Centres and Associate Centres. A *Directory of UNEVOC Institutions*, which will cover both UNEVOC Centres and Associate Centres, is expected to be published by UNESCO in early 1995.

All UNEVOC Centres and Associate Centres will receive *UNEVOC INFO* and UNEVOC publications regularly. They will be invited to send representatives to participate in UNEVOC meetings, workshops and international or regional projects. Bilateral co-operation will also be encouraged and supported.UNEVOC institutions will benefit greatly from participating to the UNEVOC network.

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REGIONAL UNEVOC MEETINGS

As mentioned in the first issue of *UNEVOC INFO*, four regional UNEVOC meetings were held in late 1993 and early 1994 to initiate UNEVOC activities and networking in the regions. Technical and vocational education experts from forty-seven Member States of UNESCO participated in these activities. Here are the reports of these meetings which were contributed by UNESCO Regional Offices.

AFRICA : UNEVOC Regional Consultation Meeting

The *UNEVOC African Regional Consultation Meeting* was held in Nairobi, Kenya, from 18 to 23 October 1993. Twenty technical and vocational education experts from Cameroon, Côte d'Ivoire, Ethiopia, Kenya, Senegal, Uganda and Zimbabwe participated. The meeting was organized by the UNESCO Regional Office for Education in Africa (BREDA) in Dakar and hosted by the Centre for Curriculum Studies in Africa (CCSA), Kenyatta University.

Participants at the UNEVOC African Regional Consultation Meeting, Nairobi, October 1993

After reviewing the current development of technical and vocational education in the participating countries, extensive discussion was undertaken on the introduction of computer science and technology curriculum into technical and vocational education at secondary level. It was recognized that for most African countries it has not been possible to implement computer science and technology in the national curriculum at secondary level, due to the lack of resources and trained teaching staff.

To catch up with technological advancement, the participants suggested that a project for developing a prototype curriculum of computer science and technology for secondary technical and vocational education institutions in the region should be initiated, within the framework of UNEVOC project. With great interest, the participants visited several local schools where computer courses were offered.

The meeting then went on to discuss UNEVOC activities and networking in the region. UNEVOC had the full support of all participants. The project's three major areas - international exchange of ideas, experience and studies on policy issues, national research and development capacities, and access to data bases and documentation - were considered to be feasible and practical for the African region.

The meeting made the following recommendations to UNESCO and its Member States in the region:

For Member States

The Member States should ratify the 1989 *UNESCO Convention on Technical and Vocational Education;*

A Technical and Vocational Education Committee should be established at the National Commission for UNESCO in each Member State;

The participants in this meeting should serve as interim contact persons for UNEVOC for the national activities until such time as the official nominations of the co-ordinating centres (institutions) have been made by each country;

The nomination for national co-ordinating institutions should be submitted to the UNESCO Regional Office in Dakar by 31 December 1993;

The Member States should encourage Regional UNEVOC Networking to be established as soon as is practicable;

Workshops and seminars should be organized by UNESCO in conjunction with Member States in order to popularize the activities of UNEVOC.

For UNESCO/UNEVOC

Workshops should be organized by UNESCO/UNEVOC at the regional level on the following themes:

Methods of collecting and disseminating information and experiences on technical and vocational education and its related fields;

Methods of developing appropriate training programmes and materials, especially in the field of computer science;

Establishment of relevant policies in human resources development in technical and vocational education.

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ARAB STATES : UNEVOC Expert Meeting

From 20-24 March 1994, the first *Regional Technical and Vocational Education Expert Meeting in the Arab States* was held in Manama, the capital of the State of Bahrain. The purpose of the meeting was:

- to introduce Member States in the region to the 1994-1995 Work Plan of the UNEVOC project;
- to discuss joint action in curriculum development; and
- to develop a working mechanism for future regional co-operation among specialized institutions in the region.

Thirty-eight participants from fourteen countries attended the meeting: Algeria, Bahrain, Egypt, Jordan, Iraq, Lebanon, the Libyan Arab Jamahiriya, Oman, Saudi Arabia, Sudan, the Syrian Arab Republic, Qatar, Tunisia and the United Arab Emirates. The International Labour Organization (ILO), the Arab Federation for Technical Education (AFTE) and the Arab Bureau of Education for the Gulf States (ABEGS) also took part.

The meeting came up with a number of recommendations for curriculum development and for the establishment of an information network of specialized institutions in the Arab States.

Participants recommended that the role of the world of work be enhanced in the process of curriculum development. The barriers between general education on the one side and technical and vocational education on the other should be reduced, and channels opened in between. Curricula in technical and vocational education should be designed so that they serve the needs of the labour market while at the same time providing chances to continue in higher education.

The need for closer co-operation among the Arab States in technical and vocational education was stressed. Within UNEVOC, the role of Arab States should be a more active one. Optimum use should be made of expertise that already exists in the Arab States. To this end the meeting accepted the proposal made by the Minister of Technical and Vocational Education in the Lebanon and decided to establish a UNEVOC Implementation Unit for the Arab Region in Beirut.

The meeting was organized by UNEDBAS in Amman in close co-operation with the Bahrain National Commission for Education, Science and Culture.

For a copy of the final report of the meeting, please contact UNEDBAS in Amman. The report is available in both Arabic and English.

ASIA AND THE PACIFIC : Regional Meeting for UNEVOC Network Members

From 12-17 December 1993, the first *Regional Meeting for UNEVOC Network Members in Asia and the Pacific* was held in Adelaide, Australia.

The meeting was conducted by Adelaide Institute of Vocational Education, on behalf of the UNESCO Principal Office for Asia and the Pacific (PROAP), Bangkok. The meeting was attended by representatives from fifteen countries: Australia, Bangladesh, China, India, Indonesia, the Islamic Republic of Iran, Malaysia, Nepal, New Zealand, Pakistan, the Philippines, the Republic of Korea, Sri Lanka, Thailand and Viet Nam.

Policy issues

The meeting identified a number of policy issues. The participants agreed to conduct case studies examining the particular issues in their own countries.

The case studies are to be published and provided to regional meetings and seminars of UNESCO and forwarded to governments of the Member States for action where appropriate. The case studies should focus on the following aspects:

- enhancing the relevance of technical and vocational education to rural development through emphasis on agriculture, agri-base industries and community enterprises;
- fostering closer links between technical and vocational education and industry for policy formulation, programme implementation, curriculum development, sharing resources and employing graduates;
- ensuring greater convergence between general and vocational education;
- enhancing professionalism in technical and vocational education policy and make it research-based;
- promoting transition to market economy through technical and vocational education;
- creating an information system on current and future needs at the country, regional and international levels;
- planning and maintaining efficient and effective technical and vocational education programmes;
- providing a mass base for technical and vocational education by bringing women and other disadvantaged groups into its fold;
- enhancing the techno-managerial competence of technical and vocational education personnel to make it cost effective;and
- laying emphasis on information technologies to meet the challenges of future technological changes.

UNEVOC network

The meeting recommended that:

1. One UNEVOC Centre and a limited number of Associate Centres be established in each country.

2. Responsibilities of UNEVOC Centres should include:
- to develop and lead a national network;
- to ensure information flow to and from UNESCO and other UNEVOC Centres;
- to contribute to UNEVOC publications and databases;
- to ensure that expertise is shared among network members;
- to provide research as requested by the UNESCO Secretariat; and
- to update the directory of UNEVOC members.

3. National Commissions for UNESCO should review the performance of the UNEVOC Centre(s) on a regular basis.

4. UNESCO is requested to ensure that UNEVOC Centres are equipped with the hardware, software (and training if necessary) for the appropriate communication of technologies.

5. The conference suggested that a suitable institution prepare a detailed proposal for the establishment of a communication network for the Asia/Pacific UNEVOC network.

Curriculum issues

1. A technical working group will be established in the Asia/Pacific region to decide on the most appropriate curriculum development method to meet the workforce needs of fast moving societies.

2. A series of national training workshops will be convened by the UNEVOC Centres to ensure the findings are promoted.

3. The meeting adopted a suggestion for a project to develop an exemplar curriculum to train entrepreneurs.

Participants at the Regional Meeting for UNEVOC Network Members in Asia and the Pacific, Adelaide, December 1993

LATIN AMERICA AND THE CARIBBEAN : UNEVOC Regional Seminar

The first *Latin American and Caribbean Seminar of the UNEVOC Project on Technical and Vocational Education* took place in Montevideo, Uruguay, from 29 November to 2 December, 1993, organized by UNESCO's Regional Office for Education in Latin America and the Caribbean (OREALC) and hosted by the Uruguayan National Administration of Public Education and by the Universidad del Trabajo del Uruguay (UTU).

The objective of the seminar, within the perspective of contributing to the improvement of technical and vocational education in the region, was to diffuse the objectives and goals of the UNEVOC project, get to know the perspectives and current situation of technical and vocational education in the region's countries, identify common needs and generate proposals tending to constitute a regional network of information and exchange of experience in the field of technical and vocational education.

Eleven countries were represented: Argentina, Brazil, Colombia, Costa Rica, Cuba, Chile, Ecuador, Jamaica, Mexico, Paraguay and Uruguay. The meeting was also attended by Uruguayan national authorities related with education and work, diplomats from friend countries, directors of international organizations, professionals and directors of technical and vocational education together with delegates representing enterprise associations and unions.

During the speeches and discussions, the following issues were addressed in detail and recommendations for future action were made by the participants:

1. Improvement of linkage between technical and vocational education and productive sector;
2. Promotion of articulation between technical education and vocational education;
3. Productive work in technical education and vocational education;
4. Decentralization of technical and vocational education systems;
5. Procedures to improve technical and vocational Education;
6. Concepts of life long education, participation and equity; and
7. Financing.

It was suggested by the meeting that through UNEVOC, technical and vocational education be improved in the region regarding three axes of action:

1. Training and development of human resources towards technical and vocational education at all its levels and functions;
2. Support the teaching/learning process (occupation analysis, professional profiles, curricula, applied basic subjects, present and distance methodologies, didactic material design);

3. Strengthening and consolidation of the regional specialists network, networks of information and documentation, network of exchange of experiences, of innovations and of rules within technical and vocational education.

To this respect it was proposed to:

- Contribute to strengthening the existent networks: CINTERFOR, CENEP/CIID, PMT/OEA, among others.
- Design data bases, complementing those existent, to cover specific needs and demands of technical education at a national, regional or state level.
- Stimulate actions which will open the access and interaction among established networks (personnel training, compatible software, format normalization, etc.)

4. To meet the above-mentioned goals, it will be necessary to choose means and modalities adequate for each case - advisory, research support, publications, seminars, workshops, horizontal co-operation activities and telecommunication, among others.

OTHER UNEVOC-RELATED ACTIVITIES

New training technologies in technical and vocational education

An *International Expert Meeting on New Training Technologies in Technical and Vocational Education* was held at the International Training Centre of the ILO (Turin, Italy), from 6-10 December 1993 and attended by twenty representatives from academic institutions, industry, as well as experts from developing countries. As one of main activities within the framework of UNEVOC, the meeting was organized by UNESCO to define the type of information and guidance which may help vocational and technical teachers to make appropriate decisions in regard to the use of new training technologies adapted to the prevailing context, resources and constraints.

It was generally recognized at the meeting that technical and vocational education has not yet made full use of information media and new technology, unlike business and industry which respond well to the rapid change of technology and information.

The core of the meeting included presentations of papers on the state of the art and experiences in the use of new training technologies, prepared by resource persons, and a brief demonstration of interactive Disk Technology (CD-I) developed by Philips. Through the various group works and debates during the week, the meeting recommended a wealth of follow-up actions leading to the implementation of a new training technologies guidance programme and network.

As a product of this meeting, a handbook entitled «*New Training Technologies: The State-of-the-art in 1994*» will soon be published by UNESCO and ILO.

UNEVOC Regional Curriculum Project in Asia and the Pacific

During the first Regional Meeting for UNEVOC Network Members in Asia and the Pacific (Adelaide, Australia, December 1993), delegates indicated their strong support for the development of curricula in entrepreneurial skills, to cope with the rapid economic development in the region.

As a follow up to this proposal, seven countries in the region - Australia, China, India, Indonesia, Malaysia, Pakistan, and the Republic of Korea participated in the UNEVOC Regional Curriculum Project. This project was funded by the Department of Employment, Education and Training (DEET), Australia, under the sponsorship of UNESCO/PROAP. Adelaide Institute of Vocational Education, one of the two institutions in Australia participating UNEVOC network, acted as the host to the regional meeting held from 30 May to 16 June 1994.

This meeting, which was in fact a technical working group of experts from the above mentioned seven countries, was asked to develop an exemplar curriculum for entrepreneurial skill for small business which was adaptable to a range of national contexts, was competency based, and was focussed at a technical and vocational education level.

During the meeting, the participants outlined their own national economic and educational context and identified issues relating to the project. The group, led by the project facilitator, went through the Designing-a-Curriculum (DACUM) process to identify competencies for inclusion.

These competencies were clustered into modules and learning outcomes were developed along with assessments, assessment criteria and content statements - all components of a Competency Based Curriculum. The available resources were identified and assessed. These included texts, learning materials and the various communication technologies which could be utilized.

The exemplar curriculum is composed of six modules: Entrepreneurial Skills, Planning to Start a Small Business, Establishing a Small Business, Managing and Operating a Small Business, Evaluating a Small Business and an Entrepreneurial Small Business Project. The document identifies the learning outcomes, the assessment criteria for each learning outcome and the course content. The document also identifies a range of support materials (all in English) including books, videos and potential texts.

The document has been developed to provide a structure with considerable flexibility for adaptation to various national contexts in the region. The curriculum has been developed in such a way so that it not only provides broad

skills but can also be focused on particular contexts important to specific locations or target groups. The curriculum has been developed for face-to-face delivery but can be adapted to distance education with the option of tutorial support.

The curriculum has an emphasis on practical demonstration and application of the modules. It aims at the development of attitudes and values. The modules have been developed so that they can be taught in a range of combinations depending on the target audience.

The working party developed a timeline for the next stages of the project based on the document being implemented in all UNESCO Member States. This takes account of further development of the curriculum, adaptation for countries/regions/groups, development of instructional material and training of personnel leading to a pilot project of the adapted curriculum, commencing January 1996. The working party are looking towards the evaluation of the project in the year 2000.

This model curriculum is currently being circulated among the UNEVOC participating institutions in the region for adoption and adaptation.
Copies of the model exemplar curriculum document may be obtained from Adelaide Institute of Vocational Education, G.P.O. Box 1872, Adelaide, Australia 5001 (Fax # 08-2078249) or ACEID, UNESCO/PROAP in Bangkok.
(This report was provided by Adelaide Institute of Vocational Education and UNESCO/PROAP.)

CHINA : International Symposium on Technical and Vocational Education

An *International Symposium on Technical and Vocational Education* was held from 13-18 September 1993 in Beijing, China. Dr. Gisela Dybowski of the German Federal Institute for Vocational Training (BIBB) who served as Vice-Chairperson of the symposium, transmitted the following report:

This symposium was co-organized by the Chinese State Education Commission and the Chinese National Commission for UNESCO, and sponsored by UNESCO through its Participation Programme. Twenty-three experts in technical and vocational education from twenty-one countries around the world participated in this symposium as did thirty-four Chinese representatives of various ministries, vocational schools and colleges from Beijing and the provinces.

The discussion and presentations of this symposium concentrated on the following themes:
- the role and function of technical and vocational education in national socio-economic development;
- the role, function and participation of enterprises in technical and vocational education;
- financing and personnel in technical and vocational education;
- levels, systems of schooling and management of technical and vocational education;
- promoting regional, national and international co-operation.

The substantive conclusions of this symposium may be summarized under four headings:

1. Key issues in reform of technical and vocational education at the national level

The symposium considered that the widely perceived low status of technical and vocational education needs to be improved by concerted effort. These efforts would be aided by co-operation at regional level to analyse the current situation and strategies for change. The symposium called upon countries to review the adequacy of action to upgrade the skills of adult workers, to establish an appropriate balance between youth and adult training that is consistent with short and long-term socio-economic development, and demographic characteristics.

Training in the textile vocations at Huangzhuang Vocational Senior Middle School Beijing. (provided by Dr G. Dybc

2. Key issues at institutional/enterprise level

Traditional technical and vocational education has often been too pre-occupied with the theorical aspects of vocational skills so that practical performance of graduates fell far short of industry needs. Some of the causes of this deficiency are obvious -budgetary restrictions, inadequacies in teaching methods and equipment, poor links with industry and the labour market - but are not easily solved. There is strong interest in the experience of some countries in addressing this issue by developing industrial skill standards as the basis for curriculum development, teaching and assessment.

3. Recent international developments

The participants welcomed the growing interest of international agencies in the development of technical and vocational education, and the work under UNESCO auspices, especially UNEVOC. It was also recognized that multilateral financial

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institutions, in particular the World Bank and the Asian Development Bank, are developing their expertise in and support for technical and vocational education.

4. Conclusion

The dominant emphasis at this symposium was the role and contribution of technical and vocational education to socio-economic development. However, this by no means implies that there was any support for downgrading the role of technical and vocational education in achieving social justice, either in respect to the role of unions in representing workers' interest in technical and vocational education, or in respect to its critical contribution to upgrading employment opportunities for women and disadvantaged groups.

The role of technical and vocational education in socio-economic development is now receiving much greater attention by governments, just at the time when the linking of training to rapidly changing industry and technology requirements is becoming more difficult. In response to this challenge, there are widespread reforms now occurring in most countries addressing very similar issues in the nationally appropriate way. There is a clear scope to improve the effectiveness of these reforms by better regional and international co-operation. With such assistance and greater sharing of experience, the symposium was confident that the technical and vocational education sector will master the new challenges to be faced.

NIGERIA : Workshop on Technical Education

The Nigerian Federal Ministry Of Education and Youth Development, Dornier International Logistics and UNESCO jointly hosted a workshop entitled « *Technical Education: A Foundation for a Healthy Economy* » in Otta, Ogun State, Nigeria, 1-2 March 1994.

Some 300 participants attended the workshop. Most were rectors of polytechnics, principals of technical colleges, officials of federal and state ministries and other government agencies, or leading representatives of private companies. Specialists from neighbouring countries also attended.

The first day was devoted to technical education in Nigeria, Germany, the United Kingdom, the United States, and Japan. The second day focused on UNESCO'S activities in technical and vocational education, the UNEVOC and on some examples of co-operation with industry in technical and vocational education. Finally, participants had the opportunity to visit Ogun State Polytechnic in Abokuta.

The most important conclusions were summarized in a Communique.

The workshop was sponsored by Dornier International Logistics, a private German company that is part of the Daimler Benz Group.

(For more information, please contact UNESCO/UNEVOC Implementation Unit in Berlin.)

RECENT RESEARCH AND PUBLICATIONS

English 15 to 19-year-olds' vocational education: some lessons for Australia

Dr. William Hall, Executive Director of Australia's National Centre for Vocational Education Research

A one-month visit to the University of York, sponsored by Australia's National Centre for Vocational Education Research (NCVER) and the British Council led to the publishing of a discussion paper which compared vocational training in Australia with that in the United Kingdom. In both, there is a strong commitment to more training. Important though this is, there are dangers in regarding training as a panacea because training is only one of the variables. Bad management, emphasis on short-term profit, and producing redundant products or products of poor quality, may also contribute to the unemployment problem.

The background for both countries is composed of a 15 to 19-year-old population which has been declining numerically, employment shifts from agriculture and industry to services, heavy emphasis on the market and governments which have a strong belief in the importance of training as a way of improving the supply side of the economy. However, there are three major differences between the United Kingdom and Australia.

Firstly, the United kingdom is a member of the European Union and that is leading to important changes to training. Secondly, the boundaries between training and vocational education have become blurred in Australia, whereas in the United Kingdom they remain the responsibilities of two different government ministers. Thirsly, Australia has a federal system of government, with education being the responsibility of the separate states and territories.

The report discusses employment trends, the meaning of the market, how 15 to 19-year-olds are educated, the education politics in both countries, assessment and accreditation (but especially National Vocational Qualifications), local level control (Training and Enterprise Councils), funding of vocational education and training, and priority issues for Australia. Fourteen important issues are identified as meeting further consideration.

The complete report is available from the National Centre for Vocational Education Research, 252 Kensington Road, Leabrook, South Australia 5068, Australia at a cost of SA17.00.

IN BRIEF

UNEVOC gained support in Arab States

The Second Session of the Advisory Committee of the Regional Programme for the Universalization and Renewal of Primary Education and the Eradication of Adult Illiteracy in the Arab State (ARABPEAL II) was convened in Cairo, 5-8 June 1994, followed immediately by the Fifth Conference of Ministers of Education and those Responsible for Economic Planning in the Arab States (MINEDARAB V), Cairo, 11-14 June 1994.)

The recommendations adopted by the Advisory Committee were submitted to MINEDARAB V. Five recommendations were related to technical and vocational education and UNEVOC. The Committee recommends that the Arab States:

- Consolidate links between general and technical and vocational education, and between technical and vocational education and the world of work through the greater diversification of technical and vocational education content and of the related delivery systems;

- Ensure, in co-operation with business and industry, the mutual recognition of technical and vocational education qualifications in the Region;

- Promote the use of the print and electronic media to deliver technical and vocational education programmes to areas and populations where access is difficult;

- Provide equal opportunities in technical and vocational education programmes for women and girls;

- Derive benefit from the International Project on Technical and Vocational Education (UNEVOC) through the enhanced participation of the Arab States technical and vocational education Associated Centres and institutions.

MINEDARAB V was attended by 180 high ranking officials from the Arab States and observers from international and regional organizations.

UNEVOC International Advisory Committee (second session)

The second session of UNEVOC International Advisory Committee will be held at UNESCO Headquarters in Paris from 12 to 14 December 1994.

At this session, the twelve members of the Committee will review implementation of the Project since the last session (September 1993) and future priorities of the Project.

Our next issue of *UNEVOC INFO* will cover this session in detail.

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UNEVOC INTERNATIONAL ADVISORY COMMITTEE (Second Session)

The second session of the International Advisory Committee for UNESCO's International Project on Technical and Vocational Education (UNEVOC) was held at UNESCO's Headquarters in Paris from 12 to 14 December 1994.

The meeting, which was attended by nine members from all regions, as well representatives from the Specialized Agencies of the United Nations System and observers from intergovernmental and non-governmental organizations, was declared open by Colin N. Power, Assistant Director-General for Education, representing the Director-General of UNESCO.

He welcomed the participants and dwelt extensively on activities of the UNEVOC Project during the past year and spoke on the expectations of UNESCO from UNEVOC and underlined the main objectives of the UNEVOC Project. At the end of his opening address the election of the Bureau was held.

The Committee reviewed UNEVOC activities undertaken for the 1994-1995 biennium and discussed at length the Project's future strategies.

The participants noted with great interest that during UNESCO's 27th General Conference (1993), UNEVOC was one of the most-frequently mentioned and supported activities during the General Policy Debate. It was noted that during the meetings organized earlier this year with the participation of 159 Member States in order to discuss preparations for UNESCO's Fourth Medium Term Plan, as well as UNESCO's Programme and Budget for the 1996/1996 biennium (28C/5), the further expansion of technical and vocational education was recommended as being one of UNESCO's top priority areas and particular emphasis was given to the UNEVOC Project by the participating Member States.

During the above-mentioned meetings, as well as during the UNEVOC regional meetings organized in 1993 and 1994, participants from the Member States strongly recommended that UNESCO's activities should be more pragmatic and concentrated at the national level while the different needs and priorities at the national, regional and international levels should be emphasized.

The Committee reviewed the main objectives of the UNEVOC Project and made the following observations:

Fostering international exchange of experiences and studies on policy issues

This field reflects UNESCO's intellectual rôle in providing the Member States with opportunities to exchange views on policy issues in technical and vocational education thereby contributing to reducing the gap between industrial and developing countries. It is desirable that issues and activities for the future be selected according to specific and diverse situations in various countries/regions. It would be preferable to select practical topics which could lead to the creation of extra-budgetary projects in the field.

The Committee identified the following issues which should be considered as priority areas for the UNEVOC future activities: technical and vocational education for rural development; access of girls and women to technical and vocational education; providing non-formal vocational training to street youth; management of technical and vocational education at various levels; training of trainers; quality and assessment of technical and vocational education; providing educational and vocational guidance and the concept of career education; technical and vocational education by non-governmental providers; identification of research priorities in the Member States.

Strengthening national research and development capacities

The promotion of national training activities in the field of technical and vocational education in the Member States should be encouraged. This national training activity is an important tool in the development of national capacities. The content of training to be provided should be decided in consultation with the Member State concerned, in order to meet their most important priorities. Target groups could include policy-makers, administrators, researchers and teachers/instructors etc.

The organization of national training seminars for specialists in the major fields of technical and vocational education is more cost-effective with greater impact than programmes only based on international meetings and workshops. This would be a natural extension of international activities organized during the first phase of the UNEVOC Project.

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Facilitating access to data bases and communication

The exchange of information and communication is essential for the development of technical and vocational education today. This is particularly true in developing countries where specialists actively seek information through modern techniques. To this end UNEVOC is publishing quarterly an information bulletin "*UNEVOC INFO*", a series entitled UNEVOC Studies on Technical and Vocational Education, and has promoted the linkage between UNEVOC Centres by means of electronic mail and computerized data bases etc. These activities should be encouraged and continued, particularly in the developing countries, by providing adequate facilities and basic communication equipment.

UNEVOC Networking

The already established network of UNEVOC Centres and Associate Centres should be expanded and improved. The Committee agreed with the Member States that the function of UNEVOC Centres should be more **action-oriented** with more involvement in national and sub-regional training activities and seminars and not restricted exclusively to the exchange of information. The following suggestions were agreed:

Participants in all regional or international UNEVOC activities, including meetings, studies, etc. should be invited from the UNEVOC Centres;

UNEVOC Centres should be given the responsibility of organizing the above-mentioned national training activities, which could be financed by the UNEVOC Project;

Co-operation between the UNEVOC Centres in the different countries should be encouraged and funds allocated to finance a fellowship programme facilitating short-term exchange visits between experts/specialists from the UNEVOC Centres;

The purchase of basic communication equipment could be considered for those Centres actively participating in the Project in certain developing countries;

The creation of additional UNEVOC Implementation Units at sub-regional and regional levels, subject to the available of extra-budgetary funding resources (i.e. from the host country concerned).UNEVOC network.

At the second session of the UNEVOC International Advisory Committee from left to right: Colin N. Power, Assistant Director-General for Education, Dr. Gregor Ramsey, Chairman of the Committee and Rolando Tiburtini, Chief, Section for Technical and Vocational Education, UNESCO

Co-operation with UN specialized agencies and other organizations

The Committee stressed the importance of co-operation with other UN Specialized Agencies, intergovernmental and non-governmental organizations such as the ILO, (in particular the ILO International Training Centre in Turin), UNIDO, OECD, the European Union (including CEDEFOP), the Colombo Plan Staff College for Technician Education, the World ORT Union, Education International, CONFEMEN etc. During this session, concrete proposals for co-operation with the UNEVOC Project were proposed by the representatives of these organizations which, will be followed by the UNESCO Secretariat.

Some of the Members of the UNEVOC International Advisory Committee during the second session of the Committee, Paris, December, 1994.

RECOMMENDATIONS TO THE DIRECTOR-GENERAL

The Committee made the following recommendations to the Director-General of UNESCO:

Taking into account that technical and vocational education has been given high priority by the Member States during the 27th session of UNESCO's General Conference, as well as during the recent UNESCO regional consultation meetings with the National Commissions, and in view of the recommendations of the recent MINED conferences, technical and vocational education, in particular the UNEVOC Project, be given high priority in the 1996-1997 biennium and the Fourth Medium-Term Plan (1996-2001) and, therefore, should remain as a separate sub-programme. The budget cuts, which were made during 1994, be restored and at least that level of funding be maintained for 1995 and future years.

All education sectors, including technical and vocational education, should be accorded equal status with vocational education forming an important component of all basic or general education. This position be reflected in all activities/documentation undertaken by UNESCO.

Technical and vocational education should be given due importance reflecting its equal status with other sectors of education in the preparation of the report of the findings of the Commission on Education for the 21st Century, as well as in the World Education Report.

Noting that technical and vocational education has not been a major topic for consideration by the International Bureau of Education (IBE) for many years it should be a theme for a future biennial conference of that body before the end of this century.

Consistent with its equal status, UNESCO provide seed funding to establish chairs in the UNEVOC area, in a similar way to that used to establish chairs in universities. Some of these activities could be financed from the UNITWIN programme.

The Ministers of the various Member States be written to, advising them of the current status and requirements of the UNEVOC programme, and reminding them of the equal status vocational education should be accorded with other sectors of education.

The Director-General should write to the Government of the Federal Republic of Germany expressing the International Advisory Committee's appreciation for the funding and support they have provided to the UNEVOC Project.

UNESCO's long standing commitment to life-long education should continue and its basic principles be incorporated into all future considerations concerning technical and vocational education.

The participation of other UN Specialized Agencies (in particular the International Labour Organisation), intergovernmental and non-governmental organizations should be continued and further promoted.

The next session of the UNEVOC International Advisory Committee be organized outside Headquarters, perhaps in July 1995, in view of the convening of the UNESCO General Conference at Headquarters in 1995 and the preceding sessions of the Executive Board. At that meeting the International Advisory Committee will expect to comment on budget proposals for the UNEVOC programme.

UNEVOC REGIONAL ACTIVITIES

AFRICA : Regional workshop on curriculum development

A *Regional Workshop on Methodologies for Curriculum Development in Technical and Vocational Education* was jointly organized by UNESCO's Regional Office for Education for Africa (BREDA) and the "Institut national de l'Enseignement technique et professionnel (IPNETP)", Côte d'Ivoire from 19 to 23 September 1994 in Abidjan which was attended by 24 representatives from Benin, Burkina-Faso, Central African Republic, Republic of Congo, Côte d'Ivoire, Gabon, Guinea, Guinea-Bissau, Mali, Niger and Senegal.

The main objective of the workshop was to examine and analyze existing practices in each of the participating countries on the concept, application and evaluation of curricula in order to identify proven common trends and practices. On the basis of these findings the workshop drafted curricula for the training of computer technology at the secondary level, which will serve as a prototype for the region.

The workshop was chaired by Professor Pierre Kipre, Minister of National Education of Côte d'Ivoire, who in his opening address stressed the importance played by new information technologies in general, and by computer technology in particular, in the field of technical and vocational education. He declared that informatics are now imperative not only as a work tool but also as a scientific discipline for all.

The workshop, which was well covered by the mass media, provided an valuable opportunity to publicize the UNEVOC Project. A short video film was produced to summarize the results of the workshop, which is complementary to the television documentary on education in Africa to be diffused in 1995.

As foreseen the workshop was carried out in two phases, firstly to discuss the development of curricula on a general basis and subsequently dealt more specifically with the drafting of a prototype curriculum in the field of computer technology.

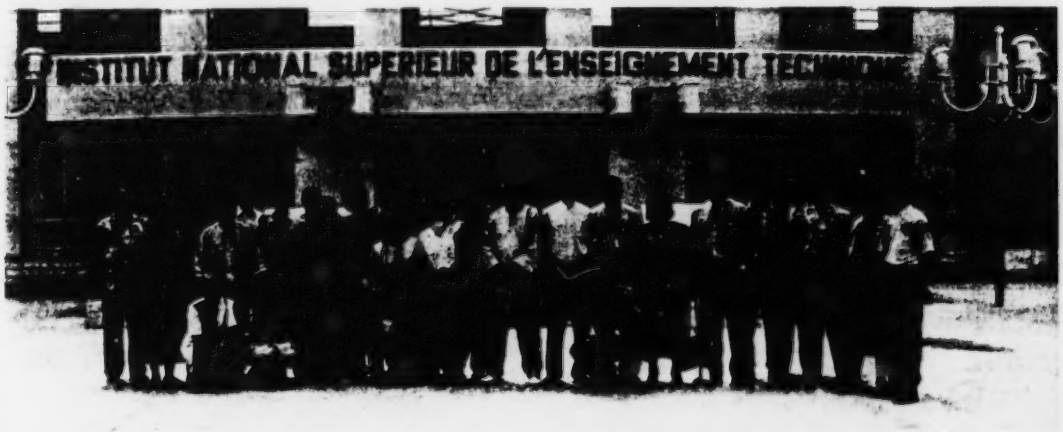
The workshop discussed trends and challenges faced by technical and vocational education in the region. Special attention was made to the concept and perspective of technical and vocational education programmes.

A closer look at major trends in technical and vocational education in Africa demonstrates an increasing demand for inclusion of informatics into the school curriculum. A number of institutes have made efforts to introduce computer science and technology aspects into their teaching programmes, without, however, a coherent training programme. It is often said that instructors plan their courses in accordance with the software in their possession without making reference to a precise training programme and often without taking into consideration the current needs of the labour market.

In order to assist the efforts of technical and vocational education institutions in the region in the teaching of computer science and technology, the participants agreed to develop a prototype curriculum based on the computer courses currently offered in the secondary vocational schools in Côte d'Ivoire and Senegal, as well as in consultation with certain companies and societies in these countries. The proposed curriculum can be easily adapted to the needs of neighbouring countries. The workshop also identified similar courses to be undertaken in the secondary schools.

The participants promised to implement the curriculum in their own countries on a trial basis which will be evaluated in 1996.

The workshop made several recommendations including the necessity to strengthen technical and vocational education by providing additional resources, as well as a broader choice of subjects, including computer technology. They also recommended that appropriate structures be created to ensure co-ordination of training programmes between the private and public sectors, as well as improvement of information flow for teachers and instructors. The workshop also proposed closer South-South co-operation in the African region. Finally it was suggested that an evaluation seminar be organized within the next two years in order to analyze the effect these rapid changes have had in the field of technical and vocational education in the region.



Participants at the Regional Workshop on Methodologies for Curriculum Development in Technical and Vovational Eduvation, Abidjan, Côte d'Ivoire, Septembre 1994

ARAB STATES :
UNEVOC regional networking

The UNEVOC Project has received considerable support in the Arab States since it was launched in 1992. 32 UNEVOC Centres and UNEVOC Associate Centres have been proposed in the following countries: Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates Republic of Yemen, as well as from intergovernmental organizations, including the Arab Federation for Technical Education (AFTE).

Regional Curriculum Development Training Seminar

A Regional Technical and Vocational Education Curriculum Development Training Seminar was held in Amman, Jordan, from 23-27 October, 1994 which was attended by representatives from the following countries: Bahrain, Iraq, Jordan, Lebanon, Mauritania, Oman, Qatar, Sudan, Syria, United Arab Emirates and the Republic of Yemen. Observers also attended from the Palestinian Authority, the Arab Federation for Technical Education (AFTE) and UNRWA. Please find below a summary of the discussions on curriculum development in technical and vocational education.

Linkage of the Curricula to the World of Work. It is important to use job analysis techniques, including identification of tasks, duties, and skills which should be included in the curriculum, taking into consideration the Unified Arab System of Professional Classification and Description issued by the Arab Labour Organization (ALO) which specifies the skills required by graduates in technical and vocational education programmes in the area. Participation of employers, employees and trade unions in the process of curriculum development is also essential. The curricula should be flexible and in modular form which is easily adaptable to different areas and programmes. Common areas of

knowledge and practical skills should be identified to facilitate integration between similar jobs thereby increasing employment opportunities for graduates. The curriculum design process should be both short and continuing-in order to meet constant labour market changes.

Integration between Technical and Vocational Subjects and Other Subjects in the Curricula. It is essential not only to include technical, vocational and practical aspects into the curriculum, but also theoretical subjects in general education such as languages, art and science in order to achieve a satisfactory balance between skills and theory to respond to the needs of the world of work. The curriculum should also include computer technology as well as entrepreneurial skills, including project preparation and management, cost assessment and a professional code of ethics. Articulation between secondary and post-secondary technical and vocational education programmes should be encouraged.

Promotion of Equal Access of Girls and Women to Technical and Vocational Education. More attention should be paid to the training of girls and women and they should be encouraged to choose occupations not traditionally reserved to women. The scope of technical and vocational education should be expanded for girls and women and programmes and curricula modified in order to provide them with productive employment at home as well as self-employment opportunities. The participation of leaders of women's associations, trade unions, leaders of employers' associations, members of trade unions and employers, should be actively sought and encouraged when preparing the curricula in order to make it more appropriate for women's employment opportunities.

ASIA AND THE PACIFIC : Case Studies on the Rôle of Technical and Vocational Education

In accordance with the UNEVOC workplan, national case studies on the rôle and status of technical and vocational education in national education systems were undertaken in the following twelve countries in Asia and the Pacific : Australia, Bangladesh, China, Fiji, India, Indonesia, Japan, Republic of Korea, Malaysia, Pakistan, Thailand and Viet Nam. The Royal Melbourne Institution of Technology (RMIT), Australia, was contracted by UNESCO for coordination of these case studies. A *Regional Meeting of UNEVOC Country Case Study Researchers in Asia and Pacific* (Kuala Lumpur, Malaysia, 12-14 September 1994) was organised by the UNESCO Regional Principal Office for Asia and the Pacific (PROAP) in co-operation with RMIT, which was attended by representatives from participating Member States, as well as from Iran.

In this meeting the participants presented and discussed their country's case studies and identified key issues for inclusion in the regional synthesis.

The meeting recommended the following:

Strategies to innovate technical and vocational education systems;

Policies needed to promote closer links between technical and vocational education institutions and industry;

Strategies to raise the social status of technical and vocational education systems;

Financial resources needed;

Efforts to include entrepreneurial orientation and skills;

Improvement of the quality of technical and vocational education teachers in order to enhance the status of technical and vocational education;

Methods to assist articulation between technical and vocational education and higher education;

Policies to improve the participation of special and disadvantaged groups;

Integration of training in the informal sector into national technical and vocational education system.

All the country studies provided a closer look at national policies and strategies which promote the development of technical and vocational education in each country. The meeting discussed, in particular, strategies to strengthen links between technical and vocational education and industry and examined policies which can promote the participation by special groups of people. The studies are both descriptive and analytical and provide an excellent basis for policy makers and others those concerned with comparative research. The meeting also discussed issues concerning the productivity and competitivity of technical and vocational education in the participating countries.

A report of the country case studies, as well as the regional synthesis will be published by UNESCO as a UNEVOC document in 1995.

Update on UNEVOC Regional Curriculum Project

A *UNEVOC Regional Meeting on Exemplar Curriculum Document on Entrepreneurial Skills for Small Business in Asia and Pacific* was held on 15 September 1994 in Kuala Lumpur, Malaysia, immediately after the regional meeting of UNEVOC Countries Case Study Researchers, since most of the study researchers were also directly involved in the preparation of the exemplar curriculum document for entrepreneurial skills for small business produced at the Adelaide Institute of Vocational Education in an expert working group meeting from 30 May to 17 June (please refer to *UNEVOC INFO* #2).

The Chairperson of the group which developed the Exemplar Document presented its main points, explained its purpose and the principles on which it was based. In particular, it was pointed out that the proposed curriculum was competency based and had been developed as six modules which could be delivered using a range of methodologies, from distance to classroom situations. Each one could be offered as a stand-alone module. The sequencing of the modules also allowed complete flexibility in offering the total course required, in all about 200 hours of instruction.

The curriculum experts from Bangladesh,India, Malaysia and the Republic of Korea informed the meeting that their countries had already started action to adopt/adapt the exemplar curriculum to meet their own national needs and that implementation was taking place rapidly.

The meeting discussed the progress of this project and made several recommendations which will be followed up by UNESCO/PROAP.

Regional Technical Working Group Meeting in Curriculum Development and Adaptation

A *Regional Technical Working Group Meeting in Curriculum Development and Adaptation* was organized by PROAP from 29 November to 6 December 1994 at the Pandit Sunderlal Sharma Central Institute of Vocational Education, Bhopal, India.

This regional meeting was attended by representatives from the following nine Member States of UNESCO: Australia, Bangladesh, China, India, Indonesia, Malaysia, New Zealand, Pakistan and Thailand. The delegates included senior educational administrators, staff development specialists and specialists in curriculum development for technical and vocational education.

The meeting reviewed various approaches to the development of vocational curricula and discussed relevant case studies. A guidebook was compiled on Exemplar Practices in Technical and Vocational Educational Curriculum Development and Adaptation. This guide-book provides information on the process to be followed in the development and adaptation of curriculum and outlines an exemplar process for curriculum development, providing advice on adaptation to a specific national context.

Discussions were held concerning distribution of the guidebook, establishment of a Core Monitoring Group, provision of technical support to those UNEVOC Centres undertaking regional projects, translation and sharing of curriculum documents and instructional materials across the region, as well as production of a booklet containing key information about each UNEVOC Centre in the region, creation of research data bases in the Member States and a Clearing House for Curriculum and Research at a selected UNEVOC Centre in the region.

Republic of Korea: Fellowships for technical and vocational education

Within the framework of UNESCO's Fellowship Bank Scheme, the Republic of Korea provided funding for developing Member States in the Asia and Pacific region, for eight fellows to undertake a training programme in the field of technical and vocational education. These fellowships were for the benefit of policy-makers, administrators and/or curriculum development specialists to further their knowledge through an in-depth study of the Korean experience in this field. From some 22 candidatures received from 13 Member States eight applicants were selected from the following countries: Bhutan, Indonesia, Kyrgyzstan, Maldives, Pakistan, Philippines, Thailand and Tonga.

The training programme took place in Seoul from 14 November to 10 December 1994 and was organized by the Korean National Commission for UNESCO, in close co-operation with the Ministry of Education, the Ministry of Foreign Affairs, and the Korean Educational Development Institute (KEDI). The programme made efforts to reflect the urgent priority needs of the Member States for innovative action in the field of technical and vocational education, within the broad framework of the UNEVOC Project.

The participants attended a one-week workshop at the beginning of the programme to introduce and exchange their own experiences on major issues concerning technical and vocational education, including national policy to reform the system, curriculum development, training of teachers, vocational guidance, management and administration, financing, the role of public and private sectors, linkage with the labour market, school-industry co-operation, responses to rapid technological changes, vocational qualifications, etc.

A one-week seminar was subsequently held in order to share the Korean experience in the development of technical and vocational education for the participants. Issues being raised in specific areas of technical and vocational education in Korea, based on the presentations made by Korean experts working in the field were discussed.

All participants were invited to visit some technical and vocational institutions and local industries where they had the opportunity to observe and further understand the real situation of Korean education and economy.

Prior to their departure, the participants were given one week for individual studies. Using the knowledge and information acquired from this programme, they developed action plans which could assist the institutions and/or organizations from where they came.

The final report of the fellowship programme is in preparation and will be published shortly.

RECENT PUBLICATIONS

UNESCO has published the first in a series entitle UNEVOC STUDIES IN TECHNICAL AND VOCATIONAL EDUCATION as a part of the UNEVOC Project's activities.

The 62-page report, **Policies and Guidelines for Educational and Vocational Guidance**, has been prepared by D. Stuart Conger, Vice-President of the International Association for Educational and Vocational Guidance (IAEVG), former Executive Director of the Canadian Guidance and Counselling Foundation. This publication was prepared as a resource document for use in the planning the vocational guidance programme in technical and vocational education.

The study provides examples for the the goals of guidance; essential elements of a policy on guidance; descriptions of major components of a guidance programme including curriculum-based career guidance, individual career planning, counselling services replying to students' needs, and support services required by the institution: a description of the responsibilities for guidance on the part of senior educational administrators, heads of educational institutions, counsellors, and teachers; career development competencies recommended for students in elementary, secondary, post-secondary education, and for adults in terms of self-knowledge, educational and occupational exploration, and career planning.

The study also briefly describes the development of career portfolios by students, guidance in work experience programmes, job search training, peer counselling, the "marketing" of guidance, a statement of ethical principles, guidelines for counselling girls and women and the training of counsellors. The planning processes involved in making changes in educational programme are also outlined.

Copies of this publication can be obtained from : The Section for Technical and Vocational Education, UNESCO Paris.

PROFILE OF UNEVOC CENTRES

The German Federal Institute for Vocational Training

(Bundesinstitut für Berufsbildung, BIBB)

The characteristic feature of the dual system of vocational training needs in Germany is its combination of two learning venues: companies which provide practical instruction, and vocational schools which give theoretical instruction. In-service initial training is controlled by federal legislation and regulations while the school-based vocational training is under the responsibility of Governments of the Federal States which each have sovereign authority, which is guaranteed by federal law, for matters pertaining to education in their respective territories.

The German Federal Institute for Vocational Training (BIBB) was established in 1970 under the provisions of the Vocational Training Promotion Act which states that "A Federal Institute for Vocational Training, a legal entity directly accountable to the Federal Government, shall be established to carry out vocational training tasks".

The BIBB to-day is composed of six main departments with approximately 300 professional staff. The governing body of the institute is a Board composed of representatives from the four social groups responsible for vocational training in Germany: employers, employees, Governments of the Federal States (Länder) and the Federal Government. The Institute's daily business is managed by the Secretary-General.

The Board, the "common contact point for vocational training in Germany", advises the Federal Government on policy principles for vocational training. It issues recommendations and position statements for promoting the structure of vocational training and expanding and developing vocational training needs. The Board also makes recommendations for the implementation of vocational training.

The BIBB undertakes research and development activities for in-service vocational training. It provides services and counsel for the Federal Government and all parties engaged in the implementation of vocational training. The Institute's aim is the development of principles to govern initial and continuing training for skilled workers, skilled employees, journeymen and master craftsmen in commerce and industry, the crafts sector, agriculture, liberal professions, public administration, as well as modernizing and improving training needs to meet technical, economic and social changes. The main beneficiaries of the Institute's work are vocational training planners, employers' associations and trade unions, chambers of commerce, federal and state ministries, company managers and trainers, trainees and teaching staff at vocational schools.

Since the unification of Germany, the legal bases laid down by the Federal Republic of Germany to govern in-service vocational training and the operations of the BIBB are applicable throughout Germany.

The working language of the BIBB is German. Some publications are also available in other languages.

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IN BRIEF

UNEVOC activities concerning girls and women initiated

Women is one of the UNESCO Programme's three priority target groups and the UNEVOC Project also pays special attention to the equal access of girls and women to technical and vocational education. In this context, two activities within the framework of UNEVOC Project have recently been initiated:

The first activity entitled *Promotion of Equal Access of Girls and Women to Technical and Vocational Education* is to assist Member States' efforts in this field by facilitating the exchange of experiences and ideas, as well as strengthening co-operation between UNEVOC Centres in various countries. Fifteen UNEVOC Centres (institutions) from different regions of the world are participating in this in the form of national case studies to reflect current government policies, strategies and innovative measures. An international expert meeting is being organised in the summer of 1995 to review these country studies during which a policy paper will be formulated. Follow-up activities in selected Member States are also planned.

The International Association for Educational and Vocational Guidance (IAEVG) is undertaking an international survey, under contract with UNESCO, on vocational guidance for the equal access of girls and women to technical and vocational education. The survey is currently being carried out in more than ten countries throughout the world. The final report of the survey will include a summary which will cover the the major issues, common trends and innovative practices in the world. Completion of this survey is expected mid-1995.

Further information on these activities will be covered by *UNEVOC INFO* in due course.

IAEVG

The International Association for Education and Vocational Guidance (IAEVG) is an association of national and regional guidance associations, and of individual professionals active in educational and vocational guidance. The Association promotes communication between persons and organizations active in this field. It encourages the development of ideas, practices and research in guidance and counselling in developing and industrialized countries. The general offices of the Association are located at the Psychology Department of University College, Dublin, Republic of Ireland. The Association publishes a professional journal "Educational and Vocational Guidance Bulletin" and a Newsletter.

FROM OUR READERS

Since the first issue of *UNEVOC INFO* was published in September 1994, we have received many comments, remarks and suggestions from our readers, including the following:

It would be a good idea to produce UNEVOC INFO in the Arabic language, which would be in the interest of the UNEVOC Project and vocational education specialists in the Arab world. A. Nasrallah (Jordan)

The summaries of the International Consultation Meeting on the Rôle of Technical and Vocational Education in Education Systems and the International Workshop on Curriculum Development in Technical and Vocational Education were very clear. Please report in such a way on workshops or seminars. Marienfeld (Sri Lanka).

I suggest that UNEVOC INFO should include a list of publications in the context of UNEVOC activities with a short summary of their content and the way of obtaining them. P. Bejta (Albania)

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FROM THE EDITOR

As reported in previous issues of UNEVOC INFO, national case studies on the role of technical and vocational education in the educational system were undertaken in various regions of the world, within the framework of UNEVOC Project. The present issue, introduces regional overview of case studies undertaken in Asia and the Pacific as well as a summary of the Swedish national study. We trust that readers will find these reports interesting and useful.

Case studies on technical and vocational education in ASIA and the PACIFIC : a regional overview

The low status of technical and vocational education (TVE) is still a problem for many, if not all, countries. In order to identify those factors affecting the status of technical and vocational education, a series of national case studies were undertaken within the framework of the UNEVOC Project, in the following countries: Australia, Bangladesh, China, Fiji, India, Indonesia, Iran, Japan, Republic of Korea, Malaysia, Pakistan, Thailand and Vietnam which were co-ordinated by the Royal Melbourne Institute of Technology, Australia under a contract with UNESCO.

The following is a brief summary on the regional synthesis of these 13 national case studies.

The economic growth of the all participating countries has been linked to the improvement of their human resources development and there is a general tendency towards education rather than for early choice of educational specialization and career, where this is economically possible. Examples were given of a good level of co-operation between educational institutions, industry and commerce towards enhancing the development of human resources in a number of countries. This is particularly true in the case of placement of students in industry undertaking related studies at educational institution or participating in joint training programmes.

Although the financing of technical and vocational education frequently represents a burden for many countries, it is being increasingly recognized as more of an investment than just as simply an expense.

In most countries, technical and vocational education is provided mainly at the secondary level, where it is common practice for education ministries to undertake technical and vocational education programmes for a period of three years, and in some cases up to six years, as an alternative to general secondary education, which is aimed at university level or other forms of tertiary education.

However, there are a number of cases where technical and vocational education is undertaken subsequent to secondary or post-compulsory education, especially in polytechnics and technical and further education colleges.

The following major issues were identified in the national case studies:

Innovative strategies: to meet with the changing needs of the labour market due to national economic development trends.

Policies to promote closer links between technical and vocational education institutions and industries.

Efforts to include entrepreneurial aspects and technical and vocational skills.

Measures to improve the quality of teachers and instructors.

When producing the country case studies, many researchers have noted the low status often attributed to technical and vocational education which is reflected in the attitude of students and potential students, their parents, employers, professional bodies, unions, teachers, government and educational administrators. We list below certain factors, which have an impact on the status of technical and vocational education, together with possible solutions to improve this situation.

Any programme which does not have a mechanism which allows students to transfer to a related course will be considered as a 'dead end' activity, which is seen as a less attractive alternative when compared to other programmes which facilitates the possibility of transfer. Lack of articulation can also restrain the development of individuals in their working careers, which apart from personal frustrations can also restrict human resource development in a nation.

This situation is an important factor in the case of students who after completion of secondary schooling, are unable to gain entry to universities. Students in this situation are more inclined to undertake technical and vocational education at the post-secondary level on the assumption that further opportunities for study will be available if they do well in these courses.

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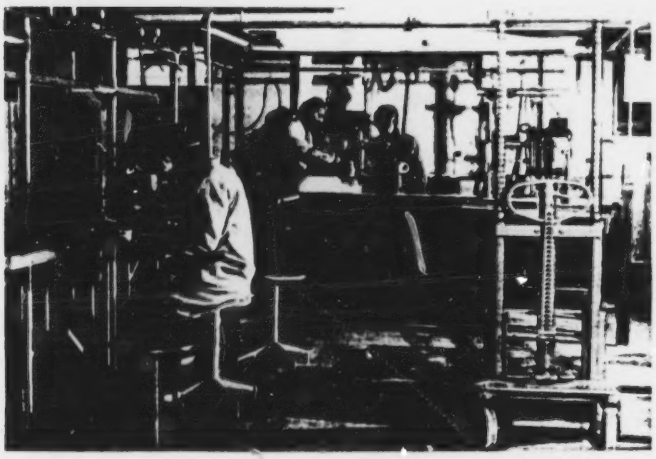
Well designed technical and vocational courses will permit some form of articulation in both lateral and vertical directions without compromising the vocational thrust of a technical and vocational course. This situation requires considerable effort not only on the part of technical and vocational education authorities, but co-operation is also required from higher education institutions and other educational and training bodies in the government and non-government technical and vocational sectors. If articulation is to be effective, it is essential that a national educational framework exists, which defines all levels of education and training, in order to avoid the problem of a multiplicity of approaches to programme classification.



Welding Training Shop

Recognition of Learning

Linked to the question of articulation is the notion of 'recognition of prior learning'. 'Prior learning' can be either of a formal or informal nature resulting competencies which can be related at the educational level.

Prior learning can be obtained by individuals, in an institutional setting through a course undertaken at an industrial training centre, or informally, 'on-the-job training'.

When prior learning attained by an individual is not recognized by an educational institution for the purposes of course entry or articulation with credit into a programme, this can be a disadvantage since the person concerned could undertake a course which is a repetition of knowledge already acquired. This problem frequently occurs in technical and vocational, where the theoretical aspects of a course may be treated in a concrete way, with less emphasis on analytical methods, with the result that the student undertaking such a programme at a technical and vocational education institution may well obtain little or no credit for studies undertaken when seeking to gain credit for his studies from a higher level institution. The solution of this problem may require the intervention of a the national authorities in order to encourage stakeholders to tackle this matter in a methodical way.

Broad based training

Many researchers commented on the need for developing a skilled work force which might be able to cope with increasing and more complex demands of the workplace. This problem is more acute for countries experiencing extraordinary growth based on the availability of low-cost labour to undertake industrial tasks requiring low levels of skill which could readily be gained on the job in an informal non-structured way.

Mass production which is labour intensive usually takes the Taylorist approach and segmented much work into specialized tasks. This approach was reelected in the skilled workforce which also tended to be quite specialized, and less flexible when confronted with significant change.

Only professionals are required to have the necessary level of knowledge to take charge of complicated systems and processes. Inevitably, when a country is moving towards its next cycle of economic growth, which is more dependent on a skilled workforce with the ability, to be competitive in the new technologically- demanding world, at an international level, it becomes apparent that what might have sufficed with regards to education and training in the past is no longer sufficient.

As the economy develops, so does the need to develop a broadly trained workforce, at all levels. The need for such a trained workforce which does not opt for specialization too early in the initial training cycle, is well recognized and has an important effect on the status of technical and vocational education emphasizing on a broad-based curriculum.

Curriculum

The actual success of any educational activity is closely related to the quality and relevance of curriculum. In addition to ensuring that curriculum is broad based, each proposed training activity must be directed at developing a particular skill. It is important that curriculum development is aligned to the needs of industry and enterprises in harmony with long term national objectives. Further, It is important that curriculum development be directed towards the acquisition of competencies required by industry and enterprises.

Quality

Quality has a direct impact on any product or service, and the provision of technical and vocational education is no exception. The notion of quality is related to the excellence of a service and in the case of technical and vocational education relates to the relevancy of curriculum, the efficiency and effectiveness of course delivery , the timely provision of required equipment and resources, the creation of the whole educational environment. The quality of a programme depends on the efficient use of the available resources applied to deliver a programme. Clearly if insufficient resources are available this will affect the quality of a programme. In many countries the demands for

expenditure on technical and vocational outway the available resources. Furthermore, the trend towards funding for defined outcomes rather than the model which simply relies on financial inputs, puts pressure on educationnal administrators to efficiently manage available resources and bring about the best quality educational outcomes possible.

Teachers

Teachers are identified as the key element for the provision of good quality technical and vocational education programmes. It is essential that technical and vocational teachers are not only qualified in an academic sense, but also possess a good knowledge of practical systems and processes within their field of competence. Ideally, this should be attained constantly keep up to date by regular contact with industry or commerce or otherwise through in-service programmes. However, this is not always possible and an infrastructure should be put in place in order to overcome such deficiencies. The Indonesian Technical Teacher Upgrading Centres which develop industrial competencies are a good example of a solution to this problem. In addition, all teachers regardless of their level of teaching should prepare technical and vocational education pedagogy, which is essential, before a teacher commences teaching duties or shortly thereafter. In many cases funds available for technical and vocational education teachers' salaries are significantly less than comparable employment in industry or commerce, which results in substantial dropout of these teachers in order to take up better paid jobs in. All of the above have an impact on the standing and status of technical and vocational education in general.

Industry Linkages

Links to industry are another key aspect which has an effect on the status of technical and vocational education, and it should be noted that technical and vocational education systems in all countries of the region have either formed effective links with industry and commerce, or are in the process of doing so. Nevertheless, it is obvious that in many countries there are significant gaps in good working relationships between technical and vocational education and industry. This is partly due to the unsatisfactory image of technical and vocational education and in some instances will require a significant change in relationships between technical and vocational education and industry. If the government in a given country recognizes the importance of having a well trained workforce which will assist industry to promote economic growth, particularly when industry moves away from labour-intensive manufacturing towards a more technologically advanced industrial sector, as well as further growth in the service sector, it may be necessary for national governments to look into the whole question of links between technical and vocational and industry, with a view to establishing links at the national level, while at the same time encouraging dialogue and promoting co-operation between technical and vocational education institutions and industry at the local level.

Duplication

Duplication of the provision of technical and vocational education not only occurs between government-funded bodies that are involved in technical and vocational education, but also technical and vocational education provided by non-governmental bodies in the private or charity sector. This often contributes to confusion in the community of the value and standing of courses undertaken and qualifications awarded. An example of these difficulties are problems with curriculum development, varying course standards, non-standard nomenclature of courses, and a lack of overall integration of effort which is frequently disadvantageous to student either when seeking employment or how to articulate to other programmes due to a lack for recognition of studies undertaken. Many countries are moving towards various forms of partial privatization of technical and vocational education provision. This is likely that these difficulties will increase unless remedies are found to re-dress the situation and solutions found to integrate technical and vocational education programmes for the national good. This situation requires the involvement of the government in the development of regulatory mechanisms to oversee matters such as nomenclature, generic course guidelines, articulation arrangements etc. ,for all technical and vocational education providers, in both the government and private sectors.

For more information, please contact UNESCO Headquarters in Paris or UNESCO/PROAP in Bangkok.

THE ROLE OF TECHNICAL AND VOCATIONAL EDUCATION IN THE SWEDISH EDUCATION SYSTEM : UPPER SECONDARY SCHOOL REFORM SINCE 1992

The following is a summary of the national case study which was undertaken by the Education Centre of Kristianstad, Sweden under contract with UNESCO, in 1994.

In Sweden, technical and vocational education is an integral part of the national education system and as such cannot be considered as a separate entity. Swedish labour market policy and education policy often go hand in hand but are not inter-changeable. Technical and vocational education has the complex task of solving difficult problems at different levels in a constantly changing labour market, as well as being an integral part of the country's education policy with long-range vision, together with a strategy for maintaining and improving the country's wealth. In this context, wealth refers to something much more than simply the concept of material possessions.

Internationalization, the revolution in information and communications systems, and rapid technological changes have had a great influence on all groups, levels and aspects of

Swedish society. Consequently, these three major factors are of the utmost importance in the reasoning behind the creation and implementation of a successful educational system, of which, technical and vocational education is a fundamental element. At the beginning of the 1990's, Sweden's position was weakened since its labour force was not as well educated as that of other industrial nations in the West.

Today, Swedish education, specially technical and vocational education, is in a state of transition. In 1992 a major reform was initiated, the Upper Secondary School Reform 1992 whose impacts are far reaching all aspects of technical and vocational education and general/ theoretical education in youth upper secondary education and in municipal adult education as well as some important aspects of university education and application requirements. The Reform includes a new system of notation, as well as a new curriculum and became effective in the autumn of 1994. The Upper Secondary School Reform 1992 is the most important reform of this kind in this century in Sweden and has been created in order to guarantee the individual's right to freedom of choice as well as to meet society's demand for schooling which adapts to present rapidly changing conditions at both the national and international levels.

One of the main objectives of the Reform is the concept of life-long learning. Education must give people the necessary competence and self-confidence, providing the individual with a basis to recognize not as a threat but as a potential opportunity. Multi-facetted knowledge is necessary especially in times of dramatic and profound changes. The speed and extent of present day development in traditional technology and information/communication technology makes knowledge a constantly renewable commodity. This means that education, be it theoretical or vocational, must not be seen as a final product, but as a life-long learning process. In this respect, formal education must not only provide students with certain skills and knowledge but also the necessary key tools for updating skills and knowledge throughout their entire life.

The main strategies of the Upper Secondary School Reform 1992 are:

- Decentralizing education authority and decision-making power;
- Increasing local autonomy in the allocation of funds for education;
- Providing smoother transition from upper secondary education for youth to municipal education for adults;
- Creating a more course-oriented upper secondary education structure;
- Raising the status of technical and vocational education to the same level as general/theoretical upper secondary education.

Traditionally under this Reform, four groups are given particular support in order to improve their participation in national education, particularly opportunities offered by technical and vocational education: girls, immigrants, the mentally and physically handicapped.

Technical and vocational education in Sweden is financed from government subsidies and municipal funding. However, costs are not broken down into separate areas such as technical and vocational education or general/theoretical studies. Total expenditure for upper secondary schooling were approximately 17.4 billion SEK in 1992, half of which was used for technical and vocational education. In 1992, expenditure for municipal adult education were approximately 2.5 billion SEK, only a minor part of which was devoted to technical and vocational education.

Entrepreneurial orientation in technical and vocational education is underlined under the Reform. Basic business economics is now included in fifteen of the sixteen national programmes. In addition, Business Economics for Small Business is offered in eight national programmes. During the recent years of recession and privatization, Swedish society has given greater support to the small business sector. A type of «vocational» education is now available to adult students entitled «Starting Your Own Business». This, combined with the raised status of vocational education, is expected to lead to an increase in the number and status of small business.

Several private industries initiated different forms of co-operation with the upper secondary schools in order to ensure appropriate technical and vocational education. These initiatives also include efforts to de-dramatize technology in the elementary schools in order to encourage their pupils to study technical and vocational programmes in the future.

With reference to teacher training and supplementary teacher training, the Reform stipulates that, in addition to the specific knowledge and skills related to the subject being taught, the teacher's responsibility includes other non-traditional aspects which are meant to promote an atmosphere of democracy and personal awareness in the classroom. These new responsibilities, show a serious need for supplementary teacher training which is also based on the increased demands for constantly updated professional knowledge in order to keep abreast with events at the national and international levels. The need for co-operation between teachers is particularly necessary in the field of technical and vocational education as they must co-ordinate their student's education in the school with training at different commercial/industrial enterprises in order to keep in line with the policy that 15% of vocational studies must be carried out at the workplace. The type and content of supplementary training for teachers considered as one of the most important aspects of education today, for teachers of both general/ theoretical subjects and vocationally oriented subjects.

Technical and vocational education students are expected to benefit greatly from the Reform, which aims at raising the status of technical and vocational education. It is also intended to provide all members of society with equal access to educational opportunities which promote life-long learning.

More information may be obtained by contacting the UNESCO/UNEVOC Implementation Unit in Berlin, Germany.

UNESCO'S ACTIVITIES IN THE FIELD

Seminar on Co-operation between Educational Institutions and Enterprises in Technical and Vocational Education

A Seminar on Co-operation between Educational Institutions and Enterprises in Technical and Vocational Education was held from 2-12 May 1995 in Germany. It was organized by UNESCO's UNEVOC Implementation Unit in Berlin, in co-operation with the Industrial Occupations Promotion Centre of the German Foundation for International Development (DSE). The meeting was attended by some 50 experts, including participants from five African and eight Asian countries, who contributed creative and stimulating ideas for increasing the co-operation essential for technical and vocational education to serve effectively and efficiently the world of work. Practical plans for the follow-up activities were developed. A detailed report is in preparation and will be available shortly.

More information on the seminar will be given in the next issue of UNEVOC INFO, or can be obtained by contacting UNESCO/UNEVOC Implementation Unit in Berlin, Germany.

Workshop on Organizational and Management Alternatives for Vocational Education

Within the framework of UNESCO's Participation Programme 1994/1995 an International Workshop on Organizational and Management Alternatives for Vocational Education was organized by the Central Institute of Vocational Education, Bhopal, India from 7-10 February 1995. This workshop was attended by nine participants from Australia, Bangladesh, Canada, China, Germany, Japan, Norway, Philippines, United Kingdom who examined the existing organizational and managerial structures in the participating countries and exchanged views on the role of formal school system in vocational education in the context of the changing economic scenario of the world. The meeting also discussed technical and vocational education through distance learning where applicable in certain countries.

The participants made recommendations concerning the organization of vocational instruction, managerial structures for implementation as well as modalities for extra budgetary funding, particularly in co-operation with industry. For more information, please contact UNESCO/PROAP in Bangkok.

Seminar on rural Vocational Eduvation in China

UNESCO organized, in co-operation with the Chinese National Commission for UNESCO, the Department of Vocational and Technical Education of the Chinese State Education Commission, a Seminar on Rural Vocational Education, which was held at the International Research and Training Center for Rural Education (INRULED) in Boading, China from 18 to 21 April 1995. The meeting was attended by thirty-five policy makers, administrators and experts. A resource person from Australian was also invited to address the meeting on current trends in rural vocational education in Australia.

The seminar discussed and summarized experiences in rural vocational education and training in China as follows:

- Rapid development of rural vocational education has been witnessed in China since early 1980's as the result of the following joint efforts:
- Emphasizing rural vocational education in the overall socio-economic development plan as well as in the educational strategies by governments at various levels;
- Adopting appropriate policies for school management and the guidance of rural vocational education, e.g. encouraging rural vocational education settings to serve the local communities; providing farmers with opportunities and means for income-generating activities and demonstrating the advantages of rural vocational education on converting educational outcomes to productive purposes;
- Integrating and co-ordinating basic education, vocational/technical education and adult education in the rural areas;
- Operating rural vocational education institutions flexibility in order to meet the local conditions and the practical needs of farmers;
- Strengthening the links between school and industry, etc.

During the meeting the participants pointed out that although remarkable achievement have been made in this field, they are still facing new challenges such as:

- Adjustment of school management along with the development of the rural market-economy in order to meet the present and future requirements;
- Function of rural vocational education in the current process of industrialization and urbanization of rural areas;
- Training of «new farmers» for the transformation from traditional to modern agriculture with high production, high quality and high efficiency;
- The role that rural vocational education can play to compensate the unbalanced development of the rural economy in China, etc.

The participants agreed that the Government's role in this field is still important in terms of financial support, macro-planning and co-ordinating for the balanced development of social-economic structure. It was also suggested that models should be established to demonstrate the effects of integrating pre- and post-service education based on the coordination of basic education, vocational /technical education and adult education. Reforming traditional teaching methods and educational materials by introducing innovations, for example, competency based education and project training method, etc. was also discussed during the seminar.

IN BRIEF

IIEP Programme in Centrale and Eastern Europe

The wave of change which is currently sweeping through Central and Eastern European countries has shaken the very foundations of vocational education and training systems of these countries. These systems were originally designed to serve the requirements of a centrally planned economy, primarily emphasizing industrial production. In recent years, the industrial tissue into which training institutions were grafted has collapsed due to the privatization of the state enterprises and the introduction of the market as the main price regulating mechanism. The vocational education and training system is expected to support the transition process by providing new skills, while contributing to the reduction of unemployment and marginalization of the most vulnerable parts of the workforce.

In this connection, a training and research programme in the field of vocational education and training was initiated by UNESCO's International Institute for Educational Planning (IIEP) in 1993 in the Czech Republic, Estonia, Hungary, Lithuania and Poland. Under this programme, research was undertaken by a team of five experts from the above-mentioned four countries under IIEP's methodological guidance. Four teams of researchers conducted similar experiences in their own countries in parallel and met at different occasions to exchange information and experience, and produced reports on the present status of vocational education in Central and Eastern Europe.

The programme culminated in a workshop entitled "*Managing vocational education and training in Central and Eastern Europe*" at IIEP from 19-21 December 1994. During the workshop the researchers presented their reports and discussed the following themes:

- Changing the architecture of the educational system in Eastern Europe;
- Decentralization of the management of technical and vocational education;
- The role of enterprise in vocational education and its relation with the economy;
- Monitoring the changes.

The participants will continue to work in their own research institutions, thus contributing to reinforcing the national research capacity. A network has also been established, involving not only the members of the research team but also IIEP and other participants of the workshop. Contacts and exchange of information and experience are expected to continue.

Summary of the workshop was introduced in IIEP NEWSLETTER Vol.XIII No.1, January-March 1995. For more information, please contact International Institute for Educational Planning (IIEP), 7-9 rue Eugene-Delacroix, 75116 Paris, France. Fax : (33 1)40728366.

OECD Conference on Vocational Education and Training

The Organization for Economic Co-operation and Development (OECD) launched an activity on "the changing role of vocational and technical education and training (VOTEC)" in 1989. This activity was designed to study the role and place of initial vocational education and training at the interface between education and employment systems in different social and economic contexts; the responsiveness of education and training to changes in labour demand and in young people's needs and aspirations.

The activity culminated in a high-level conference on "*Vocational education and training for the 21st century - opening pathways and strengthening professionalism*", which took place on 28 to 30 November 1994 at OECD, Paris. Over 200 representatives from 37 countries reviewed the main outcomes of the work undertaken during the past five years within the framework of the VOTEC activity.

Discussions during the conference highlighted common concerns across countries with regard to:

- Complementary and parity of esteem between general and vocational education;
- Identification of relevant competence, skill profiles and qualifications and the development of effective curricula and training regulations;
- Organization of education and training pathways and certification systems;
- Roles and responsibilities of government, enterprises and the social partners in defining changing skill requirements and in providing young people with relevant preparation for working life and adult life more generally;
- Sharing of costs of vocational education and training between employers, workers, families and public budgets;
- Ways in which research and development activities could contribute more effectively to inform policy decisions, to support the work of teachers and trainers in vocational education and training and improve the flows of knowledge between economic activity, education and research.

For more information, please contact Education and Training Division, OECD, 2 rue Andre Pascal, 75775 Paris, France. Fax: (33 1) 45249283.

PROFILE

Pantid Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE), India

The Pantid Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE), located at Bhopal, India, is the national apex organization for research and development in the field of vocational education. The institute has been operational since July 1993, prior to which it was part of the Department of Vocationalization of Education in the National Council for Educational Research and Training (NCERT), Delhi.

Great efforts have been made in India in the vocationalization of education in order to meet the manpower requirements for national socio-economic development. This task demands not only the modification of internal structure and content within the educational system but also the need to establish strong links between education and other sectors such as agriculture, business and commerce, industries, health and community development. The principal function of PSSCIVE therefore is to provide research and technical support to policy-makers, planners, administrators and teachers of vocational education in India.

The mandate of PSSCIVE is as follows:

- To advise and assist the Ministry of Human Resource Development, State Governments and Union Territory Administrations on the implementation of the Vocational Education Programme and the Work Experience Programme through work in curriculum development, teachers training, dissemination of information and instructional materials and evaluation;
- To promote and supervise the establishment of a comprehensive vocational education management system at the district, state, national, and institutional levels;
- To study and monitor the educational requirements of the country as a whole in regard to preparing manpower for development;
- To ensure the uniformity of patterns in the national vocational education system and to maintain quality and standards including those of teaching professions at all levels through establishing equivalence of certificates and accreditation of vocational institutions;
- To actively participate in international activities in the field of vocational education and human resource development.

In PSSCIVE, long and short training courses for the managerial staff development and vocational teachers are conducted on a regular basis and, curricula and instructional materials are developed and evaluated. It formulates and maintains a network of various types of vocational education institutions and functions as the clearing house of information for national as well as international agencies. The Institution also develops non-formal, flexible and need-based vocational programme for the neoliterates and youth who have completed primary education, school drop-outs, persons engaged in work and unemployed as well as those of partially employed.

As a UNEVOC Centre, PSSCIVE staff has actively participated in the UNEVOC Project. It hosted the UNEVOC Regional Technical Working Group Meeting in Curriculum Development and Adaptation in November 1994.

PSSCIVE has six academic divisions dealing with vocational education in Agriculture, Business and Commerce, Engineering and Technology, Health, Home Science and Humanities respectively. Each division is headed by a professor with five to six academic staff. The daily work of the institute is managed by the Project Director.
PSSCIVE publishes a bilingual journal (Hindi and English) entitled Quarterly Bulletin of Vocational Education.
For further information, please contact:
PSSCIVE, 131 Zone-II, Bhopal-462011, INDIA
Fax: (91-755) 55-8128

Korean Educational Development Institute (KEDI), Republic of Korea

The Korean Educational Development Institute (KEDI) was established in 1972 with the objectives of undertaking, fundamental research on education exploring the goals, contents and methods of education compatible with traditional and modern Korean society as well as providing the population with life-long education through the Educational Broadcasting System (EBS), affiliated to KEDI. The Institute is funded by the Government of Republic of Korea.

KEDI has three offices which are in charge of management and planning, and the following seven research centers with more than 700 professional staff: Curriculum Research and Development Center (CRDC), Educational Foundations Research Center (EFRC), Educational Policy Research Center (EPRC), Computer Education Research Center (CERC), Educational Resources and Information Center (ERIC), Air and Correspondence Education Center (ACEC), and Vocational Technical Education Research Center (VTERC).
KEDI publishes several periodicals such as the Annual Report (in Korean and English), the Journal of Education, the Educational Development, and the KEDI Newsletter (in English). Besides publishing regularly research papers and monographs, KEDI also produces a variety of teaching-learning materials, including CAI software. KEDI puts strenuous efforts to increase and strengthen its co-operation with international organizations such as UNESCO, OECD, World Bank, Asian Development Bank and major educational research institutions in other countries, through the exchange of information, hosting international study visits and symposia, and participating in various types of joint research and academic activities in Korea and abroad.

Vocational Technical Education Research Center (VTERC) is composed of five research teams with 28 professional staff. One of its major tasks is to develop innovative strategies in responding to the rapidly changing demands

for competent technical workforce. The Centre's work include:

- Developing curricula and teaching-learning materials for various vocational subjects in elementary schools, middle schools and academic high schools;
- Developing training programmes, curricula, and the guidelines for proper equipment and facilities in various types of technical and vocational high schools;
- Developing educational and vocational career guidance programmes.

From May 1993, VTERC is in fully conducting a four year government-funded project, aimed at reorganizing the existing Korean TVE system at high school level. The project is concerned mainly with those who will seek employment upon graduation from academic high schools. So far, it resulted in the creation of a «New Dual Education System or 2+1 System», combining two years of study in some academic high schools and one year of practical training at a work place. Extensive research on the related subjects has been undertaken.

The contact address for KEDI and VTERC is:

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OBITUARY

ANDRE BRUYERE - MEMBER OF THE UNEVOC INTERNATIONAL ADVISORY COMMITTEE

It was with sadness that we announce the death of one of our colleagues, who was a member of the UNEVOC International Advisory Committee - André BRUYERE (France) who passed away on 11 March 1995.

Mr. BRUYERE started his long career with the French Ministry of Education where he played an important role as Inspector General for Technical and Vocational Education. He was also Vice President of the Association Française pour le Développement de l'Enseignement Technique et Professionel (AFDET), and member of the French National Commission for UNESCO.

For a long time, he was supporting the idea of co-operation and maintaining a dialogue at the international level. In this context, it was felt that France should play a major role in the field of technical and vocational education; he promoted a close co-operation with UNESCO and its International Bureau of Education (IBE).

It was at André BRUYERE's suggestion that France organized in April 1991, in co-operation with UNESCO and the French National Commission for UNESCO an important Symposium for Education, Training and Employment in Poitiers and thanks to his dynamic leadership, this symposium was a very successful event.

In 1992, UNESCO launched its International Project on Technical and Vocational Education (UNEVOC) and an obvious choice for the Project's first International Advisory Committee was André BRUYERE. He played an important role in the formulation of the UNEVOC policy. His professional competence and experience were unanimously recognized.

As a follow-up of the Poitiers meeting, he also suggested the organization of the symposium on Technical and Vocational Training for the countries in a state of transition from central planning towards free market economy, and strengthening of East-West Co-operation and Partnership, which took place in Toulouse, from 19 to 21 July 1995.

We regret his departure and we will have a remembrance of him as a competent colleague and a good friend.

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Rapid socio-economic development requires greater participation of women in economic activities. In many countries the adoption of legislative measures have helped to remove discrimination in employment and education. In respect to technical and vocational education, it is worth noting that although legal steps have been taken to ensure the equal access of girls and women to such education, these measures are not frequently put into practice. This implies that many Member States require special measures in order to ensure the genuine equality of opportunity for both males and females. In this connection, the UNEVOC Project pays special attention to the promotion of equal access of girls and women to technical and vocational education.

To assist the Member States in coming to term with this issue, a *UNEVOC International Expert Meeting on the Promotion of Equal Access of Girls and Women to Technical and Vocational Education* was held, in collaboration with the Korean Manpower Agency (KOMA), at Seoul, Republic of Korea, from 10-15 July, 1995. It was attended by experts from 14 Member States including Argentina, Australia, Botswana, Brazil, China, Czech Republic, Germany, India, Japan, Kenya, Malaysia, Republic of Korea, Sweden and Turkey.

The opening session was attended by Dr. Colin POWER, Assistant Director-General for Education of UNESCO, Mr. Seung-Boo CHOI, Vice Minister of Labour of the Government of Republic of Korea, and Mr. Jae-Suk KIM, President of KOMA. They all stressed the importance of the active participation of women in socio-economic development, and the need for continuous effort to achieve equality of access of girls and women to technical and vocational education.

Each participant prepared a country discussion paper based on a set of guidelines provided by UNESCO. The following common patterns emerged:

The situation regarding the promotion of equal access of girls and women to technical and vocational education is very similar in all participating Member States regardless of religion, culture and level of development. The problem of equal access of girls and women to technical and vocational education is a part of a bigger problem of the image accorded to technical and vocational education. This image is bound up in bigger social problems of poverty, illiteracy, unemployment and the rigidity of a traditional culture. As such, the promotion of girls and women's access to technical and vocational education should be approached in a multi-dimensional and integrated manner.

Education and employment are related. As the level of girls and women's education rises, the tendency for gainful employment increases. This tendency also however puts women at a disadvantaged situation carrying the burden of their dual roles at home and at the work place in a traditional gender segregated culture. When a female vocational school graduate experiences difficulty in finding a job, experiences lower status and salary than her male counterpart, her perception of technical and vocational education diminishes and this unfavorably influences access to technical and vocational education and the image of such education as a whole.

While legislative measures are necessary to provide equal access for girls and women to technical and vocational education, they are not in themselves a guarantee of success.

Recognizing that the promotion of equal access of girls and women to technical and vocational education is a comprehensive issue, it requires an inter-disciplinary approach to ensure the effective management of specific initiatives in technical and vocational education. A rational, comprehensive, systematic and coordinated planning and organization of activities directed to an accepted and shared goal is invariably needed to guide the monitoring and control of a specific initiative.

There have been modest improvements in girls and women's education and employment, but gender segregation in education, employment and in society still exists. The cumulative net effect of interacting experiences at home, in school and at the work place has a major influence on the choices made by girls and women in technical and vocational education and in related careers.

Finally, it is useful to recall that the issue of girls and women's access to technical and vocational education, is a problem of perception and attitude. Society's attitude towards technical and vocational education must be transformed and reoriented by incidental and deliberate means through the structure and quality of people's experiences.

During the meeting, the participants reviewed a number of issues drawn from the country reports. The discussion started by clarifying and stating the participants' position that guided their deliberation:

Aware of the individual differences of people and recognizing the equal value of men and women's contribution to socio-economic development, it is well accepted that technical and vocational education plays a vital role in achieving social and economic equality for women.

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UNESCO
UNEVOC International Expert Meeting on
KOMA
PROMOTION OF EQUAL ACCESS OF GIRLS AND WOMEN TO TECHNICAL AND VOCATIONAL EDUCATION
여성 기술직업교육 참여 촉진 국제전문가회의
10–15 July 1995 Seoul, Korea

Participants at the International Expert Meeting on the Promotion of Equal Access of Girls and Women to Technical and Vocational Education, Seoul, Republic of Korea, July 1995.

Women should not only be adjusted to the existing structures and societal patterns, rather the structures and systems must change to properly accommodate women.

The empowerment of women should be the goal for all interventions which will lead to equality of gender status in society.

The strategies for future actions were discussed in the following four areas:

Technical and Vocational Education Aspects of General Education

Science and Mathematics for Girls

The curriculum and methodology of essential subject areas which provide the foundation for technical and vocational education should be more attractive and interesting. Science and mathematics should be made more "alive" and taught in relation to the interest of students' daily lives and the real world of work. Girls should be provided with additional/special study sessions as needed to enhance their understanding of specific science and mathematics lessons.

Vocational Subjects in General Education

The vocational aspects in general education should be promoted by sensitizing and training teachers, and restructuring curricular activities to recognize the vocational implication of basic subjects. Visits to various industries and exposure to relevant activities makes the discussion (of these vocational aspects) in the classroom real.

Teachers as the Role Models

Teachers in the general and the vocational area must be informed of and sensitized to gender issues at various stages of teacher's training (pre-service and in-service) to shape their attitude and commitment to gender balanced behaviour, as well as to demonstrate dignity in work. The teacher must be a role model and should be able to show competence to teach in a gender-inclusive way.

Technical and Vocational Education and Training as Preparation for an Occupational Field

Gender Segregation in the Choice of Fields of Study

Gender neutrality must be practiced in the choice of fields of study to avoid gender segregation. It should be achieved by improving the teaching of the subjects traditionally taken by girls and encouraging girls and women to enroll those male dominated courses.

Teaching of the subjects traditionally taken by girls in technical and vocational education should be enhanced by updating its content and facilities; by bringing in a technological orientation such as computers and the use of other modern technology. This will not only attract girls but boys as well. Improving the learning environment for girls also contributes to better learning competencies which increase chances of employment for girls.

The participation of girls and women in new and male dominated courses should be enhanced by offering a wider choice of courses. The provision of suitable financial and non-monetary incentives, including success stories of women role models in these new and male dominate careers are helpful measures. Additionally, linking these new courses to market demand will make them more attractive to girls.

Educational and Vocational Guidance and Counselling

A more effective structure of educational and vocational guidance and counselling services in schools responsive to the issue has to be instituted to promote equal access of girls to technical and vocational education.

The appropriate training and sensitization of guidance staff and counsellors themselves to the gender issue is a critical factor in the effective promotion of girls and women's access to technical and vocational education. Likewise, parents (especially fathers) and employers must also be aware of the implication of gender balance and neutrality in education and employment.

Guidance and counselling literature should have feminine gender bias depicting reversal of gender roles. These materials have to be carefully and attractively designed to include a variety of information on new and male dominated areas.

Girls' self-esteem is the result of their overall experience. To enhance their self-esteem, they need to be exposed to

effective teaching methods as well as types of activities, both traditionally masculine and feminine where they are likely to succeed. Success builds self-confidence. Experiences where cooperation and teamwork with the opposite sex are developed contributes also to the value of gender partnership.

The change of attitude of parents and society as a whole towards vocational education must be effected in a concerted effort through a variety of strategies like open houses, special promotional events; print and non-print media; open-fora, projects that are both gender responsive and socially responsible; and the involvement of the community in school affairs that have vocational and technological orientation.

Teaching/Learning Process

Teaching learning processes and materials have to be gender-neutral. However, a recognition of individual differences in styles of learning rather than being gender specific must be observed to make learning effective.

There should be a common standard for evaluation. To ensure gender neutrality, men and women must be involved in the formulation of standards.

Course titles should be renamed where appropriate (e.g. dressmaking to textile technology, decoration to industrial design, etc.) to make the course more attractive. Learning resources must be so designed and packages to provide gender neutrality and a more technological orientation.

Affirmative Actions

Within the context of the socio-economic and educational culture, separate girls schools of technical and vocational education have existed in several developing countries as successful affirmative action measures. However, we should be cautious of the danger of sex segregation which may arise.

Residential facilities for girls should be established where appropriate, with funding support from the public and/or private resources.

Special facilities and funding schemes for women who are returning to work from home/maternity and child care leave should be available and supported by the government. Child care services at the work place should be provided. Flexible learning systems like distance learning, use of modules and short term training ensure skill upgrading and further education.

Special support schemes are likewise strongly suggested to assist the girls and women who are handicapped and deprived (minorities, refugees, rural, tribal, etc.) to develop their skills and capabilities to build their eroded self-esteem and, enable them to join the mainstream of social and economic activities. The quota system for girls and women is not generally favoured except for special cases like these girls and women who suffer from double disadvantage of being handicapped and deprived. Funding schemes for this group should be increased to support their training and reskilling.

Students should be involved in outreach project experiences as far as practicable. It will develop leadership skills and teamwork as boys and girls work together.

Linkage with the World of Work

Technical and vocational education should always be linked with the world of work. Entrepreneurial skills should be built into courses and special training for girls and women to assist them in putting up small scale business should be provided as needed.

Technical and funding assistance should be provided to the vocational education school graduates to encourage entrepreneurial ventures specially for girls and women.

Technical and Vocational Education as Continuing Education

To sustain economic and social confidence of girls and women, their capability for gainful employment must be continuously enhanced by providing special seminars, workshops and skills training. These measures will enable them to update their knowledge and align their competencies with the advancing requirements of the labour and employment sector.

Technical and vocational education institutions as well as employment agencies should provide flexible learning strategies which meet the training needs of women in a changing technological, economic and social environment. This includes women who are returning to work after child care leave, working part time and casual jobs, working in unskilled and semi-skilled capacities in those male dominated occupations, and in isolated and rural areas.

Employment and Social Environment

Technical and vocational education institutions should form strategic alliances with industries and jointly commit to gender sensitization projects for their immediate and surrounding community. The net benefit of implementing equal opportunity practices at the work place to the overall development of people and organizations should be stressed. Such cooperative activities will indirectly strengthen the image and resources of both institutions and industries. Eventually, employers will develop commitment to implement equal opportunity practices in the distribution of company incentives which consequently influence women workers' self-esteem.

Actions should be taken to direct the effect of the socialization process to reverse gender segregated attitudes and develop interest in technology and non-traditional careers of girls and women. This gender neutral and technological orientation should be cultivated in girls as early as possible at home and at pre-school level. Child care centres should be equipped with technology and the girls stimulated to approach technology in a creative and playful way. Girls and women's satisfactory and frequent exposure to science and technology-oriented materials and experiences will eventually develop their interest in the area.

Existing legal instruments and rational strategies should be reviewed and closely monitored for effective and consistent implementation to promote and ensure equal access of girls and women to technical and vocational education.

Government officials; school heads, support or administrative staff; employers and personnel hiring officers in industries and employees must be sensitized to gender related laws and issues as well as to current and emerging development thrusts which affect women's status and activities at the employment place.

Recognizing that Research and Development (R&D) activities provide the fundamental base for development initiatives, vocational and technical institutions should monitor, update and ensure the availability of accurate gender related data. The same should be encouraged in employment organizations.

Follow-up activities

As immediate follow-up activities, two national training workshops in this field will be organized, under the financial sponsorship of UNEVOC Project, in Brazil and Kenya later this year. The recommendations from this meeting will be taken account in the UNEVOC Work-plan 1996-1997.

THE BEIJING CONFERENCE

The following statement was adopted during the meeting. It was submit through UNESCO to the United Nations Fourth World Conference on Women (Beijing, China, September 1995).

The analysis of global issues in technical and vocational education has brought to the fore the poor status of women and their low participation in technical and vocational education, and as a consequence, low workforce participation as a general rule with some exceptions. The present status is also marked by prejudices discrimination and denial of equal right and privileges at the work place in most of the countries.

It is well accepted that women can contribute equal value to economic and social development. It is also beyond question that technical and vocational education plays a vital role in achieving social and economic equality for women.

While the battle for the equality of opportunities in technical and vocational education and workforce participation requires a long term commitment, all our efforts must be made to eliminate prejudices and biases detrimental to holistic development of women. Women should not merely be adjusted to the existing structures and societal patterns, rather the structures and systems must change to properly accommodate women. The empowerment of women being the goal for all interventions which in turn will lead to equality of status in society. The strategies must be formulated for establishing and operating structures and systems as the cutting edge to fulfill the mission of ensuring dignity of women, participation and equality, not only of access but of chance to success. In this respect, it is felt that greater thrusts would be needed for girls and women of specially disadvantaged group of socially deprived, disabled, refugees, rural immigrants, minorities, and indigenous women. Only the realization of the significance of synergy and complementarity between men and women will drive us along the desired course of action. The age-old male-centered values and the power structures must crumble to give way to balanced society of which the technical and vocational education system and the work place are very important components.

The participants (from Argentina, Australia, Botswana, Brazil, China, Czech Republic, Germany, India, Japan, Kenya, Malaysia, Republic of Korea, Sweden and Turkey) of the UNESCO International Expert Meeting on the Promotion of Equal Access of Girls and Women to Technical and Vocational Education held at Seoul, Republic of Korea, 10-15 July, 1995, strongly demand promotional action by Member States to take appropriate measures to enhance the participation of girls and women in technical and vocational education in every possible way. There is a strong need now to move away from mere rhetoric to concrete and incisive action employing appropriate methodologies to bring about the desired change.

(A monograph which includes the Report of this meeting and the country discussion papers will be published by UNESCO by the end of 1995.)

CO-OPERATION BETWEEN EDUCATIONAL INSTITUTIONS AND ENTERPRISES IN TECHNICAL AND VOCATIONAL EDUCATION

It is now generally recognized that co-operation between educational institutions and enterprises is needed, not only at the systems level, but also at the training level. Such co-operation provides a valuable environment for systematic vocational learning.

Therefore, in partnership with the Industrial Occupations Promotions Centre of the German Foundation for International Development (DSE), Mannheim, Germany; UNEVOC Implementation Unit in Berlin organized an inter-regional Seminar to address the issues related to co-operation between educational institutions and work-place enterprises, with respect to technical and vocational education.

The specific objectives of the Seminar were:

1. To clarify the issues related to this area of co-operation;
2. To develop strategies for achieving such co-operation;
3. To elaborate on the recommendations made by participants;
4. To plan follow-up activities;
5. To produce a substantial report;
6. To further develop UNEVOC.

The participants were decision-makers from technical and vocational education institutions and from work-place enterprises in the following African Member States: Kenya, Nigeria, South Africa, Swaziland and Uganda. Lecturers and heads of universities and polytechnics, as well as 13 experts from Asian countries (China, India, Indonesia, Malaysia, Philippines, Sri Lanka, Thailand and Viet Nam), were also invited.

The African programme started in Berlin and consisted of the presentation and discussion of their papers. The Asian group spent the first week in Mannheim learning about the German Dual System. They, then joined the African group in Berlin and participated in the discussions that lead to achieving the intended outcomes. The programme for the second week provided opportunity for the exchange of experiences between the two groups, and the elaboration on the findings obtained during the first week. Both groups visited a work-place enterprise as well as a vocational school centre in Berlin.

FINDINGS:

There was agreement that strengthening co-operation between educational institutions and work-place enterprises is a very significant strategy for tackling the current pitfalls of technical and vocational education in African countries. Scope for action and experiences of co-operation were introduced in the Seminar. Several factors behind the motivation to co-operate in technical and vocational education were identified as the following:

Students benefit from an early introduction to the real world of work by becoming aware of what is going to be expected of them. Their prospects on the labour market rise as a result of practical work experiences. Also the possibility of obtaining a small additional income is very significant.

Educational institutions need the advice of the world of work to adapt their curricula to the needs of the labour market, to have access to the latest technology and to guarantee adequate teachers training. Further, additional sources of income from joint projects with enterprises may be tapped.

Enterprises can profit directly from co-operation at different levels and thus, ensure the provision of a well skilled labour force. They can identify, at an early stage, students with the greatest potential for long term employment. They may be able to acquire labour at a reduced cost. The exchange of knowledge and know-how, and the joint undertaking of research and development projects, have potential for lifting productivity. The experiences of students and teachers of life within an enterprise and the participation in the renewal and adaptation of teaching and training programmes suit productive work, are of considerable value.

An extensive technical and vocational education system in a market economy can only evolve by close co-operation with and agreement by social partners and government institutions. Such system will incorporate tripartite training boards, clearing defined legal structures, and adequate policies.

The work place itself provides a most valuable environment for systematic vocational training. But, enterprises are profit-maximizing entities. Thus, they do not want to have to cope with untrained labour occupying places and using costly machinery designed for highly skilled labour. This view must be balanced by the considerable advantages of a skilled work force in the long term. However, it was recognized that this is a daunting task, considering the difficult macro-economic environment prevailing in all of the participating countries.

In order to exploit fully these potential payoffs, an adequate design for co-operation must be found for each country and for every economic sector, according to the cultural, social and economic settings. Experience from other countries, where co-operation has been and still is successful, suggests that government action that is designed to provide an effective framework is an indispensable prerequisite.

Participants of the Seminar on Co-operation between Educational Institutions and Enterprises in Technical and Vocational Education (Berlin, May 1995) visit an industrial training workshop at AEG Company in Berlin

Technical and vocational education policy

It became evident that significant variation exists among countries in the degree of co-operation between educational institutions and the world of work, both at the policy level and at the training level. In part, these problems result from the lack of defined policies toward the educational subsector.

Incentives to co-operate are needed. The recommendations made by the participants included, on the one hand, government intervention in the form of training levels, and on the other hand, a better marketing of the potential advantages of industrial attachment to students and enterprises alike.

It was contended that the recently initiated transformation of the *South African* society requires the re-designing of the whole education system. Consequently, all relevant parties (government, private sector, trade unions and providers of technical and vocational education) are involved in reforming the subsector. Special attention has been put on the representative character of the commission responsible for the reforms. The process of decision making within this framework is considered as important as the outcome.

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A human resource development system in which there is an integrated approach to education and training is the goal of this strategy.

In *Nigeria*, the Student Industrial Works Experience Scheme was introduced some years ago in order to provide practical training opportunities. It is managed by a semi-governmental type of institution, the Industrial Training Fund. It was suggested that a stronger co-operation in political decision making would be a good way to improve technical and vocational education in Nigeria. It may also diminish the observed reluctance of the large Nigerian companies to co-operate at the training level.

Similarly, in the case of *Uganda*, the lack of institutional capacity for co-operation was highlighted. It was argued that, as a primary step towards the focusing of attention of political and economic decision-makers on the problems of technical and vocational education in their country, they should be alerted to the problems.

In *Swaziland*, the political structures for co-operation traditionally exist. Technical and vocational education policy is formulated by a tripartite board. Political responsibility is divided between the Ministry of Education, the Ministry of Labour and the Public Service. Efforts were being made to introduce vocational education at secondary schools. Swaziland is characterized by a small industrial sector, a large informal and traditional sector, and a high rate of population growth. Technical and vocational education must, in response to this, prepare students for possible self employment in these sectors.

In *Kenya*, close co-operation between educational institutions and enterprises exists. Technical and vocational education has been expanded recently to cater for the various groups within the economy. An Industrial Training Act regulates since 1960 (amendment in 1971) the training of persons engaged in Industry. It includes training levy orders. Nevertheless, there is missing in it, as in the other countries, an effective mechanism and a clear policy for co-operation.

Institution Building

Successful activities of some institutions, such as offering research and consulting services for payment of services, were described. An increased offering of further training for companies for a fee, was also suggested. The slogan «fund raising by friend raising» was advocated. On the other hand, it was pointed out that most African enterprises neglect training.

Recommendations

The cardinal finding of the seminar was that policy-makers, educational institutions, and work place enterprises were not fully aware of the significance and benefits of co-operation between technical and vocational educational institutions and the world of work. It was thought to be imperative to create more awareness of the current problems of technical and vocational education and of the benefits that increased partnership between educational institutions and enterprises could make to solve them.

In order to improve the image and status of technical and vocational education, several attention-focusing initiatives were proposed. The question of what technical and vocational education was doing for itself to enhance its image and status reflects the underlying philosophy of this initiative and its key players, namely the present incumbents in technical and vocational education occupations.

The attention focusing actions could consist of:

- declaring a year, e.g. 1997, as the year of technical and vocational education;
- convincing relevant national and international bodies to thrust forward technical and vocational education;
- designing better programmes for the training of trainers; and
- attending more effectively to the vital issues of access and equity.

The following recommendations on UNEVOC Project and its network were also made:

- strengthen UNEVOC Centres;
- alert relevant people to the vital importance of this development through seminars at national, subregional and regional level;
- promote co-operation between educational institutions and enterprises;
- support the reform and improvement of curricula; and
- assist in the mobilization of resources.

The variety of approaches expressed in the seminar gave insight into commonalties within and differences among the problems in the participating African countries, and to the concepts of the international participants. The contributions on issues in technical and vocational education in Germany were aimed at demonstrating how certain features, like the common development of curricula, can be managed, and how co-operation among the parties involved can be stimulated and institutionalized through the use of laws. The objectives of this part of the seminar was to transmit the idea of social partnership as a successful policy to encounter economic and social problems.

(This report was provided by the UNEVOC Implementation Unit in Berlin. For more information concerning the Seminar, please contact the Unit.)

IN BRIEF

UNEVOC Expert Group Meeting on New Training Technologies

In 1993 UNESCO and ILO jointly organized an international expert group meeting on new training technologies for technical and vocational education (reported in *UNEVOC INFO #2*).

As a follow-up, UNESCO in co-operation with the ILO International Training Centre, Turin and the Colombo Plan Staff College for Technician Education (CPSC) convened a *UNEVOC International Expert Group Meeting on New Training Technologies for Technical and Vocational Education* at CPSC in Manila, Philippines from 3 to 7 July 1995. The meeting assessed current trends in new training technologies that will provide the impetus for technological transformations in the area of technical and vocational education in keeping with the latest advances in technology. It was attended by 31 participants who represented a good cross-section of selected experts from the region, as well as representatives of international and regional organizations and industries.

The meeting appraised the status of new training technologies in the Asian/Pacific region. The participants noted a wide range of variations among the countries in the region. The common feature found in the development of media technology is the rapid progress of digital technology, computer technology and materials technology and such technologies are integrated into multimedia technology. The uses of these technologies in technical and vocational education systems enhanced the key aspects of access and quality.

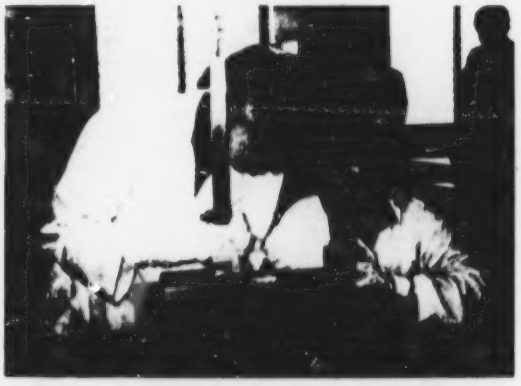
The meeting also discussed the global trends in the use of new training technologies for technical and vocational education. The experts unanimously agreed that the last decade has witnessed enormous changes on both technology front and on globalization of industry and business. The technologies continue to change at exponential pace. All these technologies have very important implications to the educational system; virtually, the educational system had acquired a new paradigm of learning which will be spanning over the next decade.

The participants reiterated that for education and training the most rapid and significant changes have been in computer systems and telecommunications.

As far as applications to technical and vocational education are concerned, trends in computer systems have been more relevant particularly in cognitive areas and in simulations for skill development. The meeting recommended that the changing role of teachers will require that they be trained in the use of the new training technologies.

Within the above perspective, the meeting produced a set of guidelines for introducing new training technologies for technical and vocational education in the developing Member States of the Asia Pacific region, project proposals for strengthening national capacities by introducing new training technologies in technical and vocational education, and an outline of a regional project in this field.

(This report was provided by UNESCO/PROAP. For more information please contact UNESCO/PROAP or the Colombo Plan Staff College for Technician Education, P.O. Box 7500 Domestic Airport Post Office, Pasay City, Philippines.)



Training in precision measurement at the Ansung Women's Industrial Master's College, Republic of Korea

UNEVOC European Symposium on Technical and Vocational Education in Countries in a Period of Transition

A symposium, addressing the specific topics on "COOPERATION and PARTNERSHIP" was organized by the French National Commission for UNESCO, with financial assistance from UNEVOC Project, in Toulouse, 19-23 June 1995. The symposium was attended by 86 participants, out of which 36 represented the Central and Eastern European countries in a state of transition to free market economy, namely: Albania, Belarus, Bulgaria, Estonia, Hungary, Latvia, Lithuania, Moldavia, Poland, the Russian Federation, Romania, Slovakia, Slovenia and Ukraine. The others came from Western European countries and several international organizations.

The main topics, co-operation and partnership were addressed in two ways: co-operation between the training system and industrial environment (i.e. the world of business and industrial enterprises); and co-operation between Western and Eastern European countries. The symposium was not designed as an official conference of countries' representatives, it rather provided a forum for an informal meeting of decision makers, administrators, research workers and educators from about 20 countries, to facilitate discussion, exchange of ideas and experiences in areas of common interest.

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The topics addressed by the symposium were:

Technical education, vocational training and partnership at the local level - the role of local partners to adapt to social and economic needs;

Co-operation between training institutions and enterprises within the framework of basic training;

The role of training institutions and enterprises within the framework of continuing education;

Experiences in exchange and partnership between Western Europe and Central and Eastern Europe.

(For more information, please contact the French National Commission for UNESCO, 34/36 Rue La Perouse, F-75775 Paris, Cedex 16, Fax: (33-1) 43 17 67 73.)

PROFILE OF A UNEVOC CENTRE

The Federal Centre of Technological Education- Parana, Brazil

The Federal Centre of Technological Education at Parana (CEFET-PR) is a technological centre located in Curitiba, capital of the state of Parana in the south of Brazil. It is an institution subsidized by the Federal Ministry of Education and Sport with administrative, patrimonial, financial and pedagogical autonomy. Currently the Centre has approximately 570 teachers and 15,000 students enrolled in various courses.

CEFET-PR was established in 1909 as a school solely concerned with the provision of some vocational and technical education for students of low socio-economic status. Now-a-days, it offers technical assistance to institutions and enterprises as well as undertakes research and development activities in the technical and industrial fields, in order to meet the needs of the community and the industry. CEFET-PR also offers tuition free technical and vocational education at secondary, higher and post-graduate levels for individuals from different social background, as well as specialization and teachers' training programmes in the area.

At secondary level, the institution offers courses aimed to prepare technicians in the following areas: buildings, electronics/telecommunications, electricity, industrial design and mechanics. It also offers graduate courses in civil construction technology and industrial engineering in electricity, electronics/telecommunications and mechanics. At post-graduate level, CEFET has two master programmes. One of them is in the field of electrical engineering and industrial informatics. The other is a new and interdisciplinary programme which focuses on educational technology and technological innovation. This programme emphasizes four lines of research such as education and work, curriculum development methods and techniques, technological innovation and the history of the technique.

In 1991, CEFET-PR expanded its activities through the creation and implementation of five decentralized units in the state of Parana. These units were established in order to meet the demands and the peculiarities characteristics of the rural areas in terms of vocational and technical education at secondary level. It has been an innovative project which has been followed by other technical educational centres in Brazil.

For further information please contact: Centro Federal de Educacao Technologies - a/c Sonia Ana Leszczinski - Avenida 7 de Setembro, 3165, Cep 80230-901 - Curitiba - Parana - Brasil - Fax: (55-41) 322-4544 - E-mail: b.Sonia Cefet.Anpr.Br

(We are pleased to receive profiles of UNEVOC centres for publication. Please send your contribution to the Section for Technical and Vocational Education, UNESCO, Paris. Thank you CEFET-PR! -Editor.)

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FROM THE EDITOR

New Year greetings to our readers!

Due to the valuable support of the Member States, UNEVOC activities forseen for the 1994-1995 biennium were successfully implemented. We are also pleased to inform you that the UNEVOC Project will continue until the end of 1997 when the evaluation report on the first phase of the Project's activities has been completed and submitted to the 29th session of the UNESCO General Conference for its consideration.

The Government of the Federal Republic of Germany has generously agreed to continue its financial contribution to UNEVOC for the 1996-1997 and we are confident that the Project will continue to make an important contribution to Member States' efforts for the further development and improvement of their technical and vocational education system during this period.

The present issue reports on the achievements of the UNEVOC Project during 1995 by including a summary of the UNEVOC Progress Report that was submitted to the UNEVOC International Advisory Committee. You will also find a detailed report of the recent International Symposium on Future Trends in Continuing Technical and Vocational Education, as well as an analytical paper entitled "The Future of Vocational Training". We are sure you will find these reports of considerable interest.

UNEVOC INTERNATIONAL ADVISORY COMMITTEE (THIRD SESSION)

The third session of the UNEVOC International Advisory Committee was held at UNESCO's Headquarters in Paris from 2 - 4 October 1995.

The meeting, which was attended by members of the Committee from all regions, as well representatives from the Specialized Agencies of the United Nations System and observers from intergovernmental and non-governmental organizations, was declared open by Colin N. Power, Assistant Director-General for Education. He encouraged participants to maintain their record of providing useful advice, which will help shape the course of growth of the UNEVOC Project towards the improvement and development, in all its ramifications, in the 1996-1997 biennium.

The committee first reviewed the UNEVOC activities undertaken during the period between the second and the third session of the UNEVOC International Advisory Committee (a summary of the Progress Report can be found in this issue of *UNEVOC INFO*).

The committee then discussed in depth the draft UNEVOC work plan 1996-1997 prepared by the UNESCO Secretariat and emphasized the following:

- Activities should clearly reflect the objectives of the Project;
- The activities for 1996-1997 should be a continuation and extension of those implemented since the inception of the Project;
- Specific needs of the various regions should be taken into consideration, particularly those of the Least Developed Countries;
- Encouragement and assistance should be given to the UNESCO Regional Offices and UNEVOC Centres in the Member States in the establishment and use of Internet and other communication devices;
- More attention should be given to vocational guidance for young people so they are better prepared for the world of work.

The meeting suggested that cooperations be maintained between UNESCO and partner organizations, such as ILO Headquarters, ILO International Training Centre in Turin, UNIDO, OECD, the European Union including CEDEFOP, the Colombo Plan Staff College for Technician Education (CPSC), the World ORT Union, Educational International, CONFEMEN etc. The representatives of these organizations in the meeting proposed various cooperative activities which will be taken into account when the UNEVOC work plan 1996-1997 is finalized.

The Committee also discussed issues relevant to the external evaluation of the UNEVOC Project. This evaluation which will commence in 1996 will assess the Project's objectives and achievements and their relevance to the needs of the Member States in order to further develop technical and vocational education. This assessment should be reflected in the evaluation report, which will make recommendations for the future of the Project beyond the 1996-1997 biennium.

In summarizing the results of the meeting, Dr. Gregor Ramsey, Chairman of the Committee, pointed out that the Committee could take heart from what had now been achieved by the Project, despite a relatively slow beginning. He mentioned that there was considerable evidence of a multiplier effect coming from the relatively low level of funding available, while the Committee had

agreed to raise again the issue of additional resources from UNESCO. Even so, cooperation between countries, the growing cooperation with key agencies, and the beginning of positive cooperation with industries and enterprises in the private sector were beginning to bear fruit. The Chairman also outlined those issues which he suggested to be considered in the evaluation. Dr. Ramsey concluded by expressing the Committee's optimism for the future and the growing importance and status of technical and vocational education.

The Committee, as they did during the previous two sessions, put forward a set of recommendations to the Director-General of UNESCO including to convene a second International Congress on the Role of Technical and Vocational Education for Sustainable Development.

PROGRESS REPORT OF THE UNEVOC PROJECT: A SUMMARY

The main activities which were implemented during the period between December 1994 and October 1995 by UNESCO Headquarters, the Implementation Unit in Berlin and the UNESCO Regional Offices for Education are summarized into the following three major program areas:

I. INTERNATIONAL EXCHANGE OF IDEAS, EXPERIENCE AND STUDIES ON POLICY ISSUES

This area of UNEVOC activities concentrated on the following policy issues:

- improving the status and attractiveness of technical and vocational education;
- strengthening the policy-making capacity of Member States in technical and vocational education;
- promoting equal access of girls and women to technical and vocational education;
- identifying future trends in continuing technical and vocational education.

Case studies on the role of technical and vocational education

National case studies on the role of technical and vocational education have been completed by the UNESCO regional offices including 13 studies in Asia/Pacific (Australia, Bangladesh, China, Fiji, India, Indonesia, Iran, Japan, Republic of Korea, Malaysia, Pakistan, Thailand and Vietnam), 12 in Africa (Burkina Faso, Cameroon, Congo, Côte d'Ivoire, Ghana, Kenya, Madagascar, Nigeria, Senegal, Swaziland, Uganda, and Zimbabwe), 5 in the Arab States (Iraq, Libya, Mauritania, Syria and Tunisia), 2 in Europe (the Russian Federation and Sweden) and 5 in Latin America/Caribbean (Argentina, Columbia, Costa Rica, Chile and Mexico). These studies illustrate the development of technical and vocational education system in these countries and the regional syntheses of issues impacting on the status of technical and vocational education have been prepared and distributed by the respective UNESCO Regional Offices.

Regional symposia for policy-makers

The following meetings were organized in order to report the results of the above-mentioned studies to policy-makers:

UNEVOC European Symposium on Technical Education and Vocational Training in Countries in a Period of Transition (Toulouse, France, June 1995). Participating countries: Albania, Belarus, Bulgaria, Estonia, Hungary, Latvia, Lithuania, Moldova, Poland, the Russian Federation, Romania, Slovakia, Slovenia, and Ukraine.

Regional Meeting on Policy Development and Implementation in Technical and Vocational Education in Asia and the Pacific (Auckland, New Zealand, April 1995). Participating countries: Australia, Bangladesh, India, Indonesia, Malaysia, New Zealand, Thailand, and Vietnam.

Symposium for Policy-Makers in Technical and Vocational Education in the Arab States (Tunis, Tunisia, April 1995). Participating countries: Algeria, Bahrain, Iraq, Jordan, Libya, Mauritania, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, Yemen and the Palestinian Authorities.

Regional Symposium for Policy-Makers in Technical and Vocational Education in Africa (Dakar, Senegal, August 1995).

Promotion of equal access of girls and women to technical and vocational education

An *International Expert Meeting on the Promotion of Equal Access of Girls and Women to Technical and Vocational Education* was held in Seoul, Republic of Korea, July 1995. It was attended by experts from UNEVOC centres in 14 Member States: Argentina, Australia, Botswana, Brazil, China, Czech Republic, Germany, India, Japan, Kenya, Malaysia, Republic of Korea, Sweden and Turkey (This event was reported in *UNEVOC INFO* #5). A monograph is being printed. Two follow-up national training workshops were organized in Kenya and Brazil.

A Survey on the Vocational Guidance for Equal Access and Opportunity for Girls and Women in Technical and Vocational Education was undertaken by the International Association for Educational and Vocational Guidance (IAEVG), under contract with UNESCO. On the basis of the results of studies conducted in 10 countries (Argentina, India, Mexico, Republic of Korea, South Africa, Spain, Sweden, Turkey, United Arab Emirates and Zambia), a monograph will be published soon.

Continuing technical and vocational education

An *International Symposium on Future Trends in Adult*

and Continuing Technical and Vocational Education was organized in Berlin in October 1995. Representatives from Australia, Cameroon, Costa Rica, Cuba, Germany, India, Mauritius, New Zealand, and Russian Federation attended the meeting which addressed and debated those contemporary and anticipated factors affecting the adult and continuing aspect of technical and vocational education. (A report can be found in this issue of *UNEVOC INFO*).

II. STRENGTHENING NATIONAL RESEARCH AND DEVELOPMENT CAPABILITIES

The activities in this area focused on methodologies of curriculum development, cooperation between technical/vocational education institutions and enterprises, and new training technologies for technical and vocational education.

Activities in various regions on methodologies of curriculum development

A *Regional Meeting on Technical and Vocational Education Curriculum Development and Adaptation* was held at Bhopal, India in December 1994. The meeting was attended by experts from Australia, Bangladesh, China, India, Indonesia, Malaysia, New Zealand, Pakistan and Thailand. A "Guidebook on curriculum development for technical and vocational education" was compiled and distributed.

A *Regional Meeting on New Perspectives for Curriculum Development in Technical and Vocational Education* was organized in cooperation with Colombo Plan Staff College and Adelaide Institute of TAFE (Australia) in Malaysia, in April 1995. Major issues concerning technical and vocational education curriculum design in the region were discussed.

Three "Guides/Modules for Prototype Curriculum Development in Technical and Vocational Education" were produced as a result of a *Regional Training Seminar on Technical and Vocational Education Curriculum Development* (Amman, Jordan October 1994). They have been distributed to the Member States in the region.

A *Regional Workshop on Curriculum Structures of Technical and Vocational Education in Africa* was organized in Abidjan, Côte d'Ivoire (August 1995). It was attended by participants from Benin, Burkina Faso, Congo, Côte d'Ivoire, Gabon, Guinea, Guinea-Bissau, Mali, Nigeria, Central African Republic and Senegal. A guidebook on curriculum development in informatics was prepared and disseminated to African countries.

A study on the "Adaptation of Vocational Curricula for Industrial Business Clerks from Germany to Russia" has been undertaken to illustrate experiences gathered in international transfer of commercial curricula for industrial clerks, under a contract with the Russian Association of Employers and in cooperation with the German Federal Institute for Vocational Training (BIBB). The final report of the study has been distributed.

Cooperation between educational institutions and enterprises

In cooperation with the Industrial Occupations Promotion Centre of the German Foundation for International Development, an *Orientation Seminar for Key Personnel on Cooperation between Educational Institutions and Enterprises* was held in Mannheim and Berlin, Germany, in May 1995. It was attended by experts from five African nations and eight Asian countries. The seminar proposed a number of actions to improve the image and status of technical and vocational education and also recommended an action plan for UNEVOC and its network (This event was reported in *UNEVOC INFO* #5).

Two pilot projects on cooperation between technical vocational education institutions and enterprises were carried out in Africa (Senegal and Uganda) and three studies on the same issue were conducted in the Arab States (Bahrain, Jordan and Lebanon).

New training technologies

The *Second International Expert Group Meeting on New Training Technologies for Technical and Vocational Education* was organized in Manila, the Philippines in July 1995, in cooperation with the Colombo Plan Staff College for Technician Education (CPSC) and the International Training Centre of ILO. The meeting appraised the status of new training technologies (NTTs) in the Asia-Pacific region and discussed global trends in the use of NTTs for technical and vocational education. "Guidelines for Introducing and Integrating NTTs for Technical and Vocational Education" and a "Draft Regional and National Project Proposal for Strengthening Technical and Vocational Education with NTTs" were produced. (This meeting was reported in *UNEVOC INFO* #5.)

III. FACILITATING ACCESS TO DATA BASES AND DOCUMENTATION

Particular attention was paid in this area to the exchange of information and documentation relating to technical and vocational education and improving the infrastructure needed to facilitate the exchange.

Newsletter

UNEVOC INFO, a quarterly newsletter with 4,000 copies in English and 2,500 copies in French, has been distributed to all National Commissions for UNESCO, all UNEVOC Centres and Associate Centres, relevant government departments of Member States, international organizations, technical and vocational education institutions and specialists.

Publications

- Functional Literacy, Workplace Literacy and Technical and Vocational Education
- New Perspectives on Assessment.

UNEVOC Network

An international UNEVOC network composed of 144 technical and vocational institutions or agencies in 96 countries has been established.

A survey of all UNEVOC network member institutions in Asia and the Pacific was undertaken and an electronic network of existing users has been established. Direct access to UNEVOC Centres has been provided through the Regional Curriculum Clearing House at the Adelaide Institute of TAFE and the Australian National Centre for Vocational Education Research. The combined resources of the two institutions are being pooled together to provide a Regional Curriculum Clearing House and a Research Clearing House for Technical and Vocational Education for Asia and the Pacific. The Australian Department of Employment, Education and Training provides support for training of technical personnel of UNEVOC centres in the region.

A regional UNEVOC network for the Arab States was established which includes 32 UNEVOC Centres and Associate Centres. In Jordan, Syria and Tunisia, national networks were also developed. A feasibility study on facilitating access to data bases and documentation, including interlinkages through modern communications techniques between UNEVOC Centres and Associate Centres in the region, is being conducted.

UNEVOC Directory

The UNEVOC Directory was further developed during the period, covering 144 UNEVOC Centres and Associate Centres from 96 Member States as well as ten relevant international and regional organizations. The UNEVOC Directory has been made available on the CD-ROM: "Key UNESCO Data on Education", issued by the Documentation and Information Service of UNESCO's Education Sector.

ADULT AND CONTINUING TECHNICAL AND VOCATIONAL EDUCATION: THE CHALLENGE OF THE FUTURE

UNEVOC Implementation Unit in Berlin, in collaboration with the UNESCO Institute for Education, held an *International Symposium on Future Trends in Adult and Continuing Technical and Vocational Education*, in Berlin, Germany, from 16-20 October, 1995.

The symposium aimed: (a) to exchange experience among participants; and (b) to develop strategies for the development of adult and continuing technical and vocational education (ACTVE).

It covered five areas of concern:

1. The transformation of work in the different regional contexts;
2. The changing orientation, and policy environment of ACTVE;
3. The changing provision and participation patterns in ACTVE;
4. The changes in content and educational approaches;
5. The change and impact of culture on the worker and on work.

A condensed summary of the outcome of the Symposium is given below.

Conclusions and recommendations

After a four day exchange of ideas and discussions, participants developed the following conclusions and recommendations.

1. Basic Principles

The following general principles concerning ACTVE were enunciated:

- ACTVE is of primary importance within education and the world of work. It is essential to the generation of the wealth necessary for overcoming poverty and for lifting the standards of living for all people. For it to be efficient it needs constant access to scientific and technological information and a universal medium of communication.
- There is a need for systematic policy on ACTVE in all countries. This policy must ensure that it is relevant to the following contexts: international; national; and subregional.
- It is important to establish a motivation for ACTVE among older persons and among the young. This implies that there should be no barriers to it, such as age, gender, religion, culture, and class. This will be assisted by a recognition of technical and vocational education skills and learning in the formal educational system, and also the possibility, through TVE of gaining access to, and of obtaining credit within, higher education. To support this, a recognized and accepted system of vocational qualifications needs to be established.
- Important aspects of ACTVE that must be fully addressed are age-structure, change, the handicapped, women, rural workers and migrants.

Some principles concerning the world of work were recorded. These were:

- We need to re-examine the nature of work. For example, are voluntary services work? Is learning work? Are the manifold duties of the modern adult work? Are domestic duties work?
- Education and training for the world of work must be integrated into it. Also, initial and continuing preparation for and in the world of work must provide for the development of the whole person.
- There needs to be an international perspective on how to care for employees. Employment should not be excessively driven on by technological development. It

needs to reinforce such values as personal responsibility, commitment to quality, cooperation, no compromise with standards, honesty etc.

Principles specifically relating to the significance of culture in ACTVE were also recorded. These were:

- Culture affects the productive capacity of the worker, and, at the same time, access to ACTVE. It is important, therefore, that there is a positive and healthy balance between accommodating cultural differences, including the culture of women, and the unifying effect resulting from the internationalizing of work.
- Research in many countries has proven the exceptional relevance of adult learning for women; for entering or re-entering the labour market, for literacy, for socializing with the wider public, and for their participation in public and political life.
- ACTVE is developing in a culture that tends to be dominated by competition and, in many cases, by the increasing use of one language, such as English. There is a need in that environment to protect national cultures and individual dignity and freedom. However, this must also be balanced with the significance of migrants in the world of work today. As a result, migrant education is an essential part of ACTVE.

General principles relating to the application of ACTVE were also formulated. These were:

- It must be learner centered, reason oriented, user-friendly and recognize prior learning. It needs to contain a values-dependent perspective of people. On the other hand, trainer-training must be so effective and efficient that the authority, competence and credibility of the teacher/trainer commands respect and gives genuine assistance to motivation and learning.
- It must have the discipline of learning attached to it, as well as the joy of learning. Generic skills need to be increased in it. There must be an articulation between it and general education.
- It needs to employ new approaches to learning, such as an open learning system, the use of educational technology, information technology, modular systems, distance education and competency-based education. This requires good teachers, good managers and good organizational and technological infrastructure.
- Government, industry, unions and non-governmental organizations must form consortia to decide on its contents and organization, and share the costs.

2. Directions for the future

Advice for future directions of ACTVE was formulated. This advice was:

- There must be equal status for ACTVE. Learning needs to be far more student-centered. Students need to be able to choose from various programs according to their own preferences and needs.
- Government funding for post-secondary education should relate to employment outcomes. It should be restructured to take away some of the power of universities to obtain public funding. To the extent possible, technical and vocational education programs should be encouraged to generate further resources for its development. This has implications for better teaching/learning.
- It is important to ensure that all programs include contextual subjects such as professional ethics, cultural sensitivity, entrepreneurism, communication skills, and a foreign language. To ensure that good teachers are employed that can achieve this outcome, the status of the technical and vocational education teacher must be improved and every effort should be made to ensure that teachers are at the cutting edge of their discipline. ACTVE should not be narrowly circumscribed by behaviourally related outcomes. It is important to foster the joy of learning as well as the rigour and discipline of learning.
- Mechanisms for improved communication, such as Internet, must be hastily applied world wide to ACTVE. This can lead to international cooperation in ACTVE that includes teaching by recognized specialists using educational technologies and Internet.
- Those returning to the workforce and the changed workplace must be fully accommodated through the effective application of ACTVE. The sensitive periods of learning for an adult, such as the first three to five years of professional life, or during times of crises, such as divorce, or at the commencement of parenthood, or when children first leave their homes; these periods must be particularly addressed.
- Learning and experience within technical and vocational education must be recognized and credited in order to give access to higher education and support life-long learning. Further, it must be recognized that there are stations and breathing points in the course of life. These must not prejudice further development, either personally or professionally.
- ACTVE must take account of the changing nature of work. This may be done by training centres and TVE institutions establishing and maintaining relationships with industry through exchange programs. On the other hand, formal education must be broadened to include science and technical education in order to facilitate learning within technical and vocational education later.

3. Strategies

Various strategies were suggested as the means to ensure the achieving of the recommendations made in the Symposium. These were:

- There must be a clear and open exchange between practitioners and researchers in ACTVE. This could result in the development of basic indicators for the provision of and participation in ACTVE.
- Vocational guidance and counselling should be given a high priority. In support of this, national systems for technical and vocational education should be developed that allow for lateral entry/exit points. This system should aim at creating a learning and skilling society from childhood through to retirement.
- There needs to be a redefinition of adult and continuing

technical and vocational education towards more generic definitions of learning outcomes.

- ACTVE in developing countries needs to increase abilities in information technology. It has to make full use of every opportunity - formal and non-formal education, institutional and self-learning, technological means, distance education, open learning - in order to make it accessible to all people.
- There must be greater cooperation between ACTVE and unions. Unions need to support this area of education to the fullest extent possible.
- ACTVE must make full use of local leaders in science, technical disciplines, the arts etc. for research, teaching and policy development and orientation.
- Governments should be requested to establish parity of funding for technical and vocational education with university education, and a funding system that rewards educational and training institutions that succeed in enabling their graduates to obtain employment. Further, funds for the development of ACTVE should move away from direct government control to allow for the attainment of the objectives of this area of education and training in a flexible manner.
- There must be cooperation among the relevant UN Specialized Agencies - UNESCO, ILO, WHO, FAO - with respect to preparing people for and maintaining them within the world of work.

(This report was prepared by Dr. B. Hobart, UNESCO Consultant at the UNEVOC Implementation Unit in Berlin.)

THE FUTURE OF VOCATIONAL TRAINING

Claudio de Moura Castro

For many years vocational training was a matter of charity. A sizable proportion of vocational schools started as schools for the poor and free fees. Hence, the persistent low status of this training and its lack of importance in public policy.

Few countries paid any attention to vocational training before World War II. But the fast growth and industrialization of post-war years lead just about all countries in the world to create significant vocational training systems. Industries were being created and there was no tradition of industrial trades to be replicated at the workplace. Only vocational schools could provide the trained labour required. Vocational training become fashionable and the more, the better.

In the 1970's, oil crisis struck the world economies. Growth subsided, inflation jumped and unemployment became a permanent fixture of most economies. Vocational training no longer was in short supply, except in a few countries. Around the world, vocational schools produced graduates that could not find jobs. Still, there was a strong tendency to offer training as a remedy to people who could not find jobs. The myth that training creates job survived for a long time.

Demand-driven vocational training: are there any other considerations?

As a reaction to the lack of attention to the employability of graduates, the late 1980's saw the inauguration of a new school of thought. "Demand-driven" vocational training was the new word of order. The rule is simple: no demand, no training. In other words, only that training which responds to a clearly identified demand should be offered. One major player in this area was the World Bank which has been lending important sums of money to vocational education and training and noticed that many countries were requesting new loans, at the same time that their existing programs could not place their students in reasonable jobs. By preparing and widely distributing its Policy Paper: Vocational and Technical Education and Training (1991) the World Bank became the champion of the "demand-driven movement".

Demand-driven vocational training is the right direction to go, no question about it. Yet, the pendulum does not stop in the middle. We risk going beyond the reasonable and finding new sets of problems. Before, trainers were closeted inside their workshops, thinking of tools and pedagogical methods, as if the outside world and the market for their graduates did not matter. Now, economists look at costs and the markets, completely forgetting what is inside vocational schools and training centres, how they work, what are the critical contents to be taught. The training process becomes a black box.

To ignore the economic aspects of training is a gross error that nobody can afford to commit. Yet, there is more to training than the bookkeeping of its costs and immediate consequences. There are results which are difficult if not impossible to measure. There are matters of equity and long run political considerations.

What to do if there is no demand? *The most perplexing tests for the demand-driven policies are offered by periods of economic crisis and unemployment. In the down-turn of the economy, too many are left without jobs. Should the government close vocational schools because there is no demand for the skills? Unfortunately, there are no good answers. Most countries refuse to close down vocational schools or drastically reduce enrollment while their economies are in the down-swing of a business cycle. Militating against a drastic reduction in capacity is the need to preserve intact the training machinery. It takes time and money to train trainers and fine tune programs. Closing them will leave the country unprepared for the next cycle of prosperity.*

Demand-driven, supply-driven or supply-created demand? *It makes no sense to train people who are not going to find jobs. But accepting this sound principle does not imply a passive attitude of having vocational training institutions merely responding to the loud and clear demand of enterprises and downsizing their training efforts if this demand is too meager. There is a way out, that is not at all different from what aggressive enterprises do when they are not happy with the level of demand. Creative enterprises try harder to market their products and invent new products, in the hope of creating a new demand*

for them. They never take demand as a given. By the same token, good vocational training is to many enterprises an unknown product that they are reticent to buy. It is up to training institutions to convince them that they will benefit from the investment. After all, it is not a matter of producing training for which there is no demand (this remains a bad idea). Instead, it is up to the marketing of training to create its own demand. Aggressive institutions try to persuade firms that their products will increase their productivity and improve the quality of their products. Some institutions even mention explicitly the "door to door" salesmanship necessary to convince traditional enterprises. This seems the way to go. There is ample - but non-systematic - evidence that entrepreneurs underestimate the potential of good training as a means to increase productivity.

Vocational training as a transfer of technology. Perhaps the most important and misunderstood aspect of vocational training is its potential role in transferring technologies hitherto not mastered by society. When workers in developing countries are trained to work differently, with different machines or with different techniques, training is the means to import a new technology and to alter the way people produce or think. In these cases, costs and benefits (measured by wage differentials) are just one of the results of training. Training should be evaluated by its broad impact on society. Singapore is a good example. This country is often cited as an example of fast economic development and of good training. What is less often mentioned is the deliberate misfit between supply and demand of skills. Singapore schools produce workers who are ahead of the local needs. Not much, but nevertheless a bit more equipped for dealing with the new technologies than required by local industry. The idea is to induce the adoption of more modern technologies by anticipating the demand of workers capable of dealing with them. In particular, the country encouraged the creation of technical schools by Japanese and German cooperation. These schools bring in the latest in the technology of these countries and are used as a means of diffusing them locally. Moreover, Singaporeans encourage the presence of expatriate instructors and the entire replication of the features found in the countries of origin of these schools, so that their students can learn the work habits and industrial organization traditions of these countries. Singapore is not comparing the costs of these fancy schools with the salaries of its graduates. What matters is the productivity of an industry that can adopt more advanced technologies sneaked in by the schools.

Training and education: complements or substitutes?

After observing the abysmal results of vocational education in many countries (typically Africa and some Arab countries), some economists concluded that it is better to have a good general education and learn the rest on the job. The problem with it is that while it describes a frequent situation, it is by no means generally true. For instance, in Iran and in Russia the worst possible preparation to face the labor market is a secondary diploma. Graduates of vocational and technical schools are much better off.

The fact is that the possibilities of learning properly a trade on the job depend very much on the nature of this trade. One can learn typing or office occupations along the way. The same is true with many relatively simple occupations. Others, however, do not lend themselves equally well to on-the-job learning. This is particularly true of the metal trades, electronics and many others which take a long time to master and increasingly require a technological and theoretical background to go with it. Of course there are many workers who learned on the job. This is not so bad when they have a relatively high level of education, access to training materials and work in firms where there are other better skilled worker to teach them. This, of course, is not true in small enterprises and in societies lacking a good tradition in these occupations.

Students in training at the Federal Centre of Technological Education, Parana, Brazil.

The fact of the matter is that good vocational training can also be a good education. Reading comprehension, calculus and physical principles can be seamlessly built into technical and workshop subjects. For students who are not particularly at ease at the world of abstraction, this is a better way of developing their basic cognitive skills. The methodical series of SENAI are a very good example of how to blend practice with basic conceptual skills.

Private schools and private funding: how far can we go?

All parties concerned may agree that a given training is important and productive. Yet, there may be disagreement on who will pay the bill. The neo-classical advice is that trainees should pay for their training, if it is of a general nature, enterprises should pay if it is "firm-specific" and the government if there are externalities or serious market imperfections. The neo-classical economists are reluctant to recognize externalities in training, and for that reason do not see much of a need for public funding of vocational training.

However, observation seems to indicate some common patterns. Predominantly middle class students attend vocational training programs preparing for white collar occupations. Typically, these students or their families can afford these relatively short and inexpensive courses. By contrast, working class youth typically

enroll in training for blue collar occupations. These are long and expensive courses, way beyond the financial reach of these students. In theory, enterprises should pay for this training, but they refuse to do it voluntarily, on the grounds that they may lose their investment if the graduates leave the enterprise. Hence, the public sector has to pay, lest the supply may be very meager. These are very controversial issues, where some economists keep repeating standard prescriptions and ignoring the real world conditions.

In the end, the vocational training that is needed to prepare a flexible workforce for the modern manufacturing sector cannot be mainly funded from private sources, either by students themselves or by enterprises. If the government does not support it, as do just about all industrialized countries, it will be handicapped by an improvised workforce. The closest case to that is the United Kingdom which may have gone too far in transferring the burden of training to the private sector. As a result, it trains less than France and Germany and it also has a lower labor productivity than these countries.

Another common prescription from economists of neo-classical orientation is the idea that the private training sector should be developed and eventually replace the public, with the well-known benefits of the increased efficiency of private management. Like other similar policies presented before, this one makes considerable sense, if managed wisely. There are no doubts that private trainers tend to operate with lower costs and are more alert to changes in demand. Yet, dismantling the public sector is not the way to support the private sector, since the fate of the private sector is linked to that of the public sector. In fact, it has been observed that countries with large and solid private training also have big and expensive public training. This does not seem to be a coincidence. The private system can be more effective than the public in the delivery of training. But it cannot afford to train instructors and prepare high quality training materials. It rides on the existing traditions and experience of the public sector. Behind the strong private vocational training system of the United States is an equally strong public training. The same can be said of France.

Conclusion

While this paper may sound as an outright advocacy of vocational training, this is not so. It is an advocacy of high quality and serious training that is fine turned to clear needs of the economy. Bad training abounds and constitutes a most unwelcome form of waste. But going back to problems of measurement, rates of return only measure one among several consequences of training. As much as it makes little sense to ignore cost-benefits aspects, looking only at such numbers is equally inadequate. It must be understood that not all vocational training can have its consequences measured.

At present, we are not finished with the business of putting the breaks on the indiscriminate supply of vocational training, regardless of its effective utilization. Many countries still train because they feel sorry for the poor, because they did it in the past and inertia prevents changing course or because they wrongly believe it will create jobs.

Economists took the lead and proposed that "no demand, no training". But using the metaphor of the pendulum, there is a risk of going too far in the opposite direction. And indeed, this seems to be happening. Training becomes a black box. What is inside it does not matter. We just check how much it costs and what comes out in the other end.

It is my contention that we need to understand the process, we need to open the black box and peek inside, if nothing else, because we do not know how to measure very well its outcomes and we risk missing some of its important consequences because they are not well captured by numbers.

In fact, some of the most important effects of training are the long run creation of a competent and adaptable work force, capable of dealing with changing technologies and displaying the proper attitudes. Ultimately, the quality of training goes much beyond the wage differentials of its graduates. Vocational training is a conduit for the transfer of technologies. Attitudes and motivations are just as important.

(This article is kindly contributed to the *UNEVOC INFO* by the author who is currently Chief of Social Program Division, Inter-American Development Bank, Washington D.C., USA. The author can be reached by fax at 202-623-2157.)

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UNEVOC Work Plan for 1996-1997

UNEVOC Publications

In Brief

Profile of a UNEVOC Centre

In November 1995, Resolution 1.16 of UNESCO's General Conference at its 28th session authorized the Director-General to extend the UNEVOC Project for a further period of two years. Based on the recommendations of the UNEVOC International Advisory Committee and taking into account ideas and suggestions from UNESCO's Member States and the UNEVOC Centres a UNEVOC work plan for the 1996-1997 biennium has been formulated, a summary of which is given below:

Within the framework of the International Project on Technical and Vocational Education (UNEVOC), activities will be carried out in the following Programme Areas:

A International exchange of ideas, experience and studies on policy issues;

B Strengthening of national research and development capabilities;

C Facilitating access to data bases and documentation and strengthening of the UNEVOC Network.

This area provides Member States with the opportunity, not only to seek, but also to exchange views on policy issues in technical and vocational education and aims to fulfil UNESCO's intellectual role in this field.
In particular, the UNEVOC Project will concentrate on the activities in the following subject areas, taking into account the specific needs of Member States:

- Raising the status of technical and vocational education;
- Continuing technical and vocational education;
- Orientation of education towards the world of work (career education);
- Technical and vocational education for rural development;
- Linkage between technical and vocational education institutions and industry.

With a view to improving the image, status and quality of technical and vocational education, the following will be pursued:

- establishing an International Award for an outstanding contribution to technical and vocational education.
- exploring the possibility of designating a year as the International Year of Education for the World of Work.
- preparations for organizing, in a future biennium, an International Congress on Technical and Vocational Education.
- various approaches towards improving the image, status and quality of technical and vocational education will be examined through a number of regional meetings, in 1997. These meetings will cover the following major issues :
- the linkage between technical and vocational education and the general education system;
- linkage between education and the world of work;
- impact of the rapid changes in the world of work on the structure and content of technical and vocational education.
- promoting the linkage between technical and vocational education and socio-economic development will be further expanded through the organization of an international expert meeting during 1996, in close cooperation with a designated Member State. The findings of the meeting will contribute towards the exchange of experiences and ideas as well as on various methods for linkage.

The global problem of the growing marginalisation, unemployment and disenchantment among youth will be treated by promoting the development of formal and non-formal technical and vocational education for unemployed youth through the organization of an international seminar on delivery patterns for technical and vocational education in the rural areas. The results will serve as a basis to define UNESCO's role and future activities in the field of nonformal technical and vocational education.

Examples of successful management and financing of technical and vocational education institutions through the concept of school-run enterprises (where learning and production are combined) will be identified, analyzed and disseminated.

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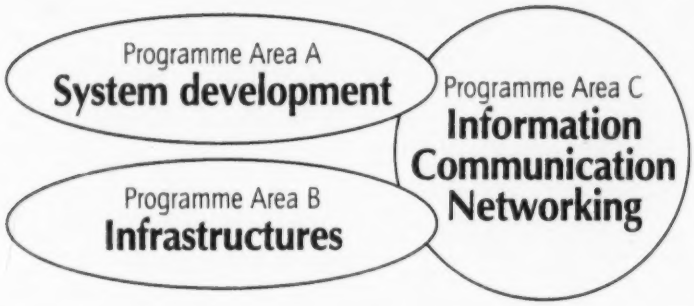


Programme Area B:
Strengthening of national research and development capabilities

This programme area supports the development of national and subregional structures for research, development and planning in technical and vocational education. The UNEVOC Project will concentrate on the following activities, in accordance with the needs of Member States:

- providing equal access of girls and women to technical and vocational education;
- staff development methods;
- development of national technical and vocational education policies and systems;
- promotion of the linkage of technical and vocational education with the world of work;
- curriculum development methodologies.

Activities foreseen for the 1996 - 1997 biennium

In order to improve access of girls and women to scientific, technical and vocational education, follow up action to the World Conference on Women (Beijing, September 1995) will be taken, including the organization of national seminars for policy makers and specialists in selected Member States. These seminars will aim at formulating national policies and plans of action. Special emphasis will be given to UNESCO's Member States in Africa, through a series of workshops for developing curricula and teacher training programmes.

A sub-regional seminar will be held in Africa in 1996 on national policy definition in technical and vocational education in order to promote the develelopment of national technical and vocational education policies and systems. Follow-up activities, based on the results of this seminar will be initiated in 1997.

On the basis of the seminar organized during 1995 a sub-regional seminar for key personnel on the co-operation between educational institutions and enterprises will be organized for African Francophone Member States during 1996 with a view to strengthening the support given by UNEVOC to the linkage of technical and vocational education with the world of work.

New approaches to the training of teachers and trainers in technical and vocational education will be exchanged by means of an international seminar to be organized in 1997. Based on this event, materials relevant to the various methodologies for the training of trainers and the management of technical and vocational institutions will be identified, published and disseminated.

In order to orientate the development of curricula in technical and vocational education, a series of national training workshops on the development and adaptation of curricula, including careers education curricula and competency-based education curricula, will be organized in the various regions.

Programme Area C:
Facilitating access to data bases and documentation; strengthening the UNEVOC Network

The aims of this Programme Area are:
- to enhance UNESCO's clearing house function in technical and vocational education;
- to strengthen co-operation within the framework of the UNEVOC Network.

This Network is designed to:
- improve information flow ;
- exchange experiences, problems encountered and their solutions, as well as the results of research;
- enhance international cooperation.

With a view to improving communication, efforts will be continued to improve exchange of information and documentation related to the objectives of the UNEVOC Project. The necessary infrastructure to facilitate communication between existing national and regional institutions in technical and vocational education will be strengthened.

The Network will be further expanded and co-operation between the member institutions will be strengthened by means of twinning arrangements and joint projects.

Activities foreseen for the 1996-1997 biennium

Communication and the dissemination of information will be supported by the following:

- *UNEVOC Info*, in both English and French, will continue to be published. Efforts will be made to have this periodical translated into Arabic and Spanish;
- The UNEVOC Directory will be continuously updated, expanded and disseminated, both in printed and in computerized forms. This is a document that gives information on all partners in the worldwide UNEVOC Network including international organizations.
- Studies and documents on the current status and future development of technical and vocational education will continue to be published and disseminated;
- UNESCO's clearing house function will be expanded by developing information and communication resources on technical and vocational education on the Internet/World Wide Web, as well as CD-ROMs.

The access of UNEVOC Centres to information resources will be facilitated through the organizing of training activities and advisory services for the use of Internet and the World Wide Web.

Co-operation between the UNEVOC Centres will be promoted through the following activities:

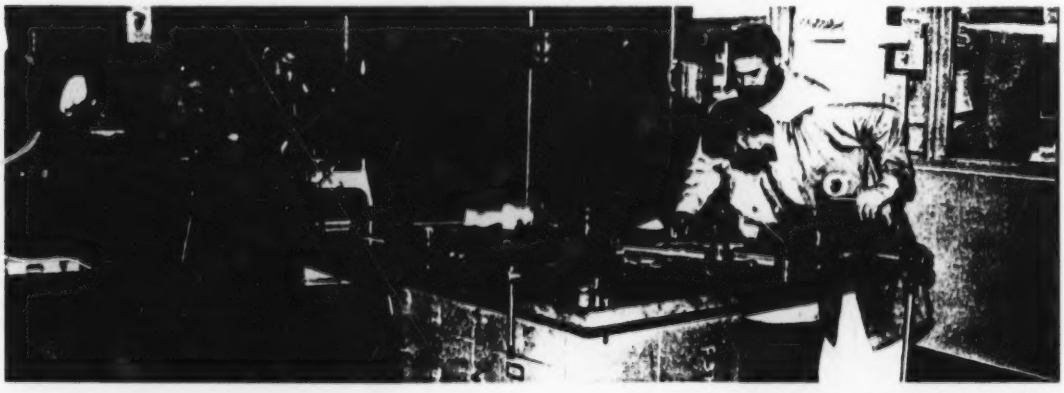
- Assistance in identifying appropriate partner institutions for the UNEVOC Centres, as well as possible sponsors for twinning arrangements;
- Assisting in the exchange of personnel (for attachments, internships, joint research, short visits, etc.) between the UNEVOC Centres;
- Promoting study visits of personnel from developing countries to selected Member States;
- Encouraging the UNEVOC Centres to undertake bilateral and multilateral research and development projects on specific issues;
- Disseminating relevant information from UNESCO and from the UNEVOC Centres through the UNEVOC network, and promoting the establishment of regional clearing houses in technical and vocational education.

Evaluation

An evaluation report on the UNEVOC Project will be prepared in 1996. This report will assess the Project's objectives and achievements and their relevance to the development of technical and vocational education in Member States and will also make recommendations for the second phase of the UNEVOC Project (1998-2001).

UNEVOC International Advisory Committee

The fourth session of the UNEVOC International Advisory Committee will be organized early in 1997 in order to review the Project's activities, examine the draft evaluation report, as well as discuss the future orientation.



Training in plumbing at a vocational school in Saudi Arabia

UNEVOC PUBLICATION (Part I)

Here is a list of UNEVOC publications with brief introductions. To obtain a copy please contact the UNESCO unit that reproduced it (address can be found in the last page of this issue). However, some of these documents may be out of stock.

UNEVOC Studies in Technical and Vocational Education

#1. Policies and Guidelines for Educational and Vocational Guidance

by D. Stuart Conger, English and Chinese, 62 pages, UNESCO Paris, 1994.

The study is a resource document for planning vocational guidance programmes in technical and vocational education. It provides examples of the aims and essential elements for policies on guidance; descriptions of major components of guidance programmes including curriculum-based career guidance, individual career planning, counselling services for students' needs, etc. and outlines the responsibilities for guidance on the part of educational administrators, counsellors, and teachers. Career development competencies recommended for students and for adults in terms of self-knowledge,

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educational and occupational exploration, and career planning are illustrated in detail. The study also briefly describes the development of career portfolios by students, guidance in work experience programmes, job search training, peer counselling. The "marketing" of guidance, a statement of ethical principles, guidelines for counselling girls and women and the training of counsellors are included as well.

#2. New Training Technologies
by A. Herremans, English and Chinese, 98 pages, UNESCO Paris and ILO International Training Centre (Turin, Italy), 1995.

This document outlines the reasons why new training technologies (NTTs) may be used in technical and vocational education and training and provides information on how they can be used in group and individual learning. This study proposed a methodology for the selection of the most appropriate NTTs for a particular curriculum or course and offers practical hints for introducing NTTs to training institutions and foresees technical trends for the next few years, to assist administrators and teachers in technical and vocational education in making the best possible investment.

#3. A Guide for Evaluation of Technical and Vocational Education Curricula
by L. Kenneke, English, 142 pages, UNESCO Paris and ILO International Training Centre (Turin, Italy), 1995.

The purpose of this guide is to help people evaluate technical and vocational education curricula. It describes the purpose, objectives, organization and concepts of evaluation. The document contains descriptions of procedure, checklists and forms which can be used to conduct evaluation of comprehensive curricula and to assist evaluators in collecting, analyzing and reporting information for surveying attitudes, observing programmes or measuring achievement. Four case studies illustrating evaluation of specific curricula are also included for reference.

#4. New Perspectives on Assessment
by I. McDonald, D. Boud, J. Francis and A. Gonczi, English and Chinese, 45 pages, UNESCO Paris, 1995.

Assessment is vital in vocational education. Today new challenges have arisen in this field which traditional approaches fail to cover. This study highlights four issues: a) the connections between assessment and learning; b) the need to focus on competence; c) recognizing competence attained outside formal learning situations; and d) assessing across many institutions. The study illustrates both concepts and practical measures in this field and is valuable for both policy-makers and practitioners of technical and vocational education.

#5. Functional Literacy, Workplace Literacy and Technical and Vocational Education; Interfaces and Policy Perspectives
by H.S. Bhola, English, 60 pages, UNESCO Paris,1995.

All societies develop suitable institutional arrangements for the delivery of "Education and Training for Work" in order to reproduce a skilled labour force for their socio-economic development. This study analyses concepts, curricula, delivery patterns assessment etc. of three programme formats: functional literacy, workplace literacy and technical/vocational education, as well as interactions between them. The policy perspectives on education and training for the world of work are also presented by the author.

#6. Vocational Guidance for Equal Access and Opportunity for Girls and Women in Technical and Vocational Education
by J.V. Miller and L. Vetter, English, 102 pages, UNESCO Paris, 1996.

This is the final report of a survey conducted in ten countries in various regions of the world. It reviews the current status of vocational guidance programmes for girls and women including national policy, legislation, funding, programme settings, evaluation etc. in these countries. The study includes a synthesis of the findings, trends and future orientations in this field, as well as a set of national strategies to improve career guidance programmes based on the results of this extensive survey.

#7. Promotion of the Equal Access of Girls and Women to Technical and Vocational Education
English, 260 pages, UNESCO Paris, 1996.

This monograph is a résumé of the findings of the "UNEVOC International Expert Meeting on the Promotion of Equal Access of Girls and Women to Technical and Vocational Education", which was organized in Seoul, Republic of Korea in July 1995 and includes the country discussion papers submitted by the participants at the meeting. The study outlines the factors which determine the orientation of girls and women towards technical and vocational education and includes information on current measures and future strategies drawn from the 14 countries who participated in the meeting, in order to promote the equal access of girls and women to this type of education.

Final Report of the International Consultation Meeting on the Role of Technical and Vocational Education in Educational Systems (Turin, Italy, 14-18 June 1993)
English and French, 20 pages, UNESCO Paris, 1993.

This report summarizes the relevant information provided in the country reports submitted by the nine participating countries. The issues pertaining to the role of technical and vocational education in educational systems, as well as the socio-economic development process are discussed, such as the linkage between technical and vocational education and the world of work, technical and vocational education as an integral element of general education and a life-long process, measures making technical and vocational education more attractive, improving the participation of women and other special groups in technical and vocational education, etc. A set of guidelines for future case studies is recommended for the follow-up activities, within the framework of the UNEVOC Project.

Final Report of the International Workshop on Curriculum Development in Technical and Vocational Education (Turin, Italy, 30 August-3 September 1993)
English and French, 24 pages, UNESCO Paris, 1993.

The report reviews and analyzes existing practices in the design, implementation and evaluation of technical and vocational curricula, in particular the development of competency-based curriculum. Some common trends and successful practices are identified, based on the experiences outlined in the participants' country papers and discussions. Major issues such as, consideration of national socio-economic development and technological progress, the relevance of curricula and competency-based vocational education, quality of teachers/instructors, students' attitude to technical and vocational education, financial support and institutional capacity in curriculum development etc. are also outlined in detail.

Proceedings of the International Symposium on Technical and Vocational Education (Beijing, 13-18 September 1993)
English and Chinese, 360 pages, UNESCO Paris, the Chinese State Education Commission and the Chinese National Commission for UNESCO, 1993.

These proceedings resume the final report and 28 papers presented during the symposium by the 20 participating countries and international organizations. These papers extensively review national policies and innovative measures to promote further development and reform of technical and vocational education in the participating countries. The final report of the symposium summarizes current trends and major issues and recommends future orientations for policy-makers in this field.

Final Report of the International Expert Meeting on New Training Technologies in Technical and Vocational Education (Turin, Italy, 6-10 December 1993)
English and French, 100 pages, UNESCO Paris and the ILO International Training Centre (Turin, Italy), 1994.

This report includes a résumé of the six technical papers presented during the meeting by experts in training technologies. These papers cover topics such as selection and use of new training technologies (NTTs) for technical and vocational education in the developing countries, comparative advantages of NTTs in terms of cost-effective training, telecommunications for distance learning, etc. The report proposed a set of recommendations for follow-up action.

Final Report of the Second International Expert Group Meeting on New Training Technologies for Technical and Vocational Education (Manila, Philippines, 3-7 July 1995)
English, 300 pages, UNESCO Paris, ILO International Training Centre (Turin, Italy) and Colombo Plan Staff College for Technician Education (Manila, Philippines), 1995.

The meeting is a follow-up activity to that held in Turin in December 1993. The report includes a synthesis of the country papers submitted by the participants and reviews the utilization of new training technologies in technical and vocational education in their countries, as well as two project proposals formulated during the meeting for the utilization of NTTs at both the national and regional level.

UNEVOC Directory
A world-wide Directory of UNEVOC Centres and UNEVOC Associate Centres, English and French, 70 pages, UNESCO/UNEVOC Berlin, first published in 1995, updated several times a yea..

UNESCO invited its Member States to nominate relevant national institutions in technical and vocational education as UNEVOC Centres. The UNEVOC Directory provides information on the UNEVOC Centres, as well as on related organisations and institutions. The latest version includes data on 146 national institutions, including 97 UNEVOC Centres and 42 UNEVOC Associate Centres, from 97 Member States of UNESCO. Data on three international and eight regional institutions are also included.

The Role of Technical and Vocational Education in the Swedish Education System
A country case study, English, 31 pages, UNESCO/UNEVOC Berlin, 1995.

This is one of a series of case studies commissioned by UNESCO to inform interested parties on various aspects of technical and vocational education in different countries. This document describes in detail the Swedish system where the school-based technical and vocational education system is closely linked to general education.

The Role of Technical and Vocational Education in the Education System of the Russian Federation
A country case study, English, 20 pages, UNESCO/UNEVOC Berlin, 1995.

This document describes in detail the situation in the Russian Federation and illustrates the considerable difficulties encountered by a technical and vocational education system in a country undergoing radical economic change.

Adaptation of Vocational Curricula for Industrial Business Clerks from Germany to the Russian Federation,
English, 18 pages, UNESCO/UNEVOC Berlin, 1995.

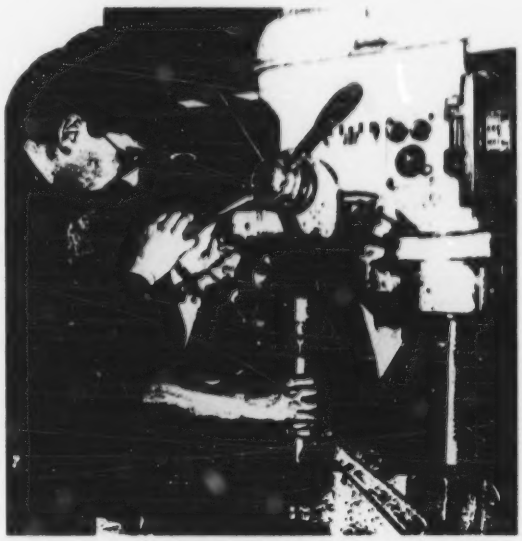
This document seeks to assist persons whose responsibility is to adapt various aspects of technical and vocational education from one country, or system, to another. It uses as a model a curriculum of the German system, adapted to the Russian Federation.

Changing Vocational World: A Challenge to Education
English, 52 pages, NCERT (New Delhi, India) and UNESCO/PROAP, Bangkok, 1992.

This report of a UNESCO seminar held in 1992 identifies the various challenges posed by the changing vocational world to the world of education, re-defining education's role to meet these challenges and recommending appropriate changes at the various levels of the educational process to link technical and vocational education more closely to the world of work. The report stresses that vocational education should have strong policy support and should be fully backed from the administrative and political point of view. The report also makes recommendations about a possible shift in funding technical and vocational education from exclusive state financing to increasing contributions from industry and beneficiaries.

Final Report of the Regional Meeting for UNEVOC Network Members in Asia and the Pacific (Adelaide, Australia, 12-17 December, 1993)
English, 36 pages, Adelaide Institute of TAFE (Australia) and UNESCO/PROAP, Bangkok, 1993.

This report of the first regional meeting for the UNEVOC Network in Asia and the Pacific identifies policy and curricula issues in technical and vocational education in the region, the expectations from the UNEVOC Network, as well as the proposed functions of UNEVOC Centres and Associate Centres. The conference papers (82 pages) and country briefing papers (98 pages) annexed to the report provide information on problems and issues in technical and vocational education in the respective Member States, together with general information about the countries.



Vocational education students in training in Colombia

Exemplar Curriculum Document for Entrepreneurial Skills for Small Business
English, 53 pages, Adelaide Institute of TAFE (Australia) and UNESCO/PROAP, Bangkok, 1994.

This document provides exemplar curricula for small business management, in six modules which were jointly developed by a selected group of experts from seven UNEVOC Centres in Asia and the Pacific. The modules are on: Entrepreneurial skills; Planning to start a small business; Establishing a small business; Managing and operating a small business; Evaluating a small business; and Entrepreneurial small business project. The document also provides information on a range of flexible options on delivery.

Guidebook for Curriculum Development and Adaptation (with Case Studies from Australia, Bangladesh, China, India, Malaysia, New Zealand and Pakistan)
English, 40 pages (Guidebook) and 100 pages (Case studies), Adelaide Institute of TAFE, (Australia) and UNESCO/PROAP, Bangkok, 1995.

This guidebook on curriculum development and adaptation was developed by a technical working group of selected experts from nine countries in the region during a meeting held at Pandit Sunderlal Sharma

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Central Institute for Vocational Education, Bhopal, India from 29 November to 6 December 1994. The information in this publication is supplemented by additional documents which include two curriculum formats and a series of case studies outlining aspects of curriculum development from certain participating countries.

Case Studies on Technical and Vocational Education in Asia and the Pacific

English, 371 pages, Royal Melbourne Institute of Technology (Australia) and UNESCO/PROAP, Bangkok, 1995.

Within the framework of the UNEVOC Project, UNESCO contracted a number of case studies in technical and vocational education in Asia and the Pacific. Researchers from Australia, Bangladesh, China, Fiji, India, Indonesia, Iran, Japan, Malaysia, Pakistan, Republic of Korea, Thailand and Viet Nam produced individual case studies with particular reference to the problems, issues and trends in technical and vocational education in their respective countries. A regional meeting in September 1994 made a synthesis of this research and formulated a number of recommendations for future action by governments in the region in order to improve the status of technical and vocational education. The case studies are accompanied by a conference report, as well as a regional overview and recommendations for future action.

Philosophies of Policy Development and Implementation in Technical and Vocational Education

English, 16 pages, Auckland Institute of Technology (New Zealand) and UNESCO/PROAP, Bangkok, 1995.

This report of a regional expert group meeting highlights key issues in technical and vocational education policy development and implementation with particular reference to purpose of technical and vocational education, contextual factors, values and some guidelines for implementation. The report also provides an outline of a framework for regional co-operation in the philosophies of policy development and implementation for technical and vocational education and training.

National Profiles in Technical and Vocational Education in Asia and the Pacific

English, 750 pages, ACEID, UNESCO/PROAP, Bangkok, 1995.

This series of national profiles in technical and vocational education has been developed for 21 Member States in Asia and the Pacific in co-operation with the Colombo Plan Staff College for Technician Education, Manila, Republic of the Philippines. The series also includes a synthesis of issues and problems in the development of technical and vocational education in the region. These national profiles provide a useful reference information on technical and vocational education systems, staff development, technical co-operation and information networking.

(To be continued in next issue of UNEVOC INFO)

IN BRIEF

National Workshops on Girls and Women in Technical and Vocational Education

As a follow-up of the *International Expert Meeting on the Promotion of Equal Access of Girls and Women to Technical and Vocational Education* held in Seoul in July 1995, two national workshops were organized in Brazil and Kenya recently with UNESCO's financial support.

The workshop in **Kenya** was organized by Kenyatta University, a UNEVOC Centre from 18-19 December 1995 which brought together policy-makers, administrators and experts in technical and vocational education, in order to discuss critical issues concerning the promotion of access of girls and women to this sector of education. The meeting pointed out that girls and women are still marginalized in the technical and vocational education system in Kenya. A closer examination of the enrollment of girls in technical and vocational subjects reveals a heavily traditional bias towards agriculture and home economics with a dismal number in traditionally male-oriented technical areas such as building construction, power mechanics, electrical/electronics technology, metalworking and wood work. Some of the major reasons for this undesirable situation include rural based traditional norms and prejudices; lack of appropriate preparation for pursuing scientific and technological careers or fields of study; a feeling of incapability in handling physically strenuous work; and lack of information on available jobs, occupations and opportunities. The participants proposed a national plan of action practical activities aimed at enhancing the equity and access of girls and women to technical and vocational education.

The workshop in **Brazil** was organized by the Federal Centre of Technological Education at Paraná (CEFET-PR), the country's UNEVOC Centre, from 28-30 November 1995. It was attended by 26 experts from various regions in the country representing CEFET's decentralized units, universities and funding agencies.

The participants exchanged ideas and experience and discussed follow-up activities, as well as related issues such as enhancing the awareness and promoting the recognition of gender issues and gender biases among employers, families, men and women; improving the participation of girls and women in fields of study considered as traditionally reserved for men; developing a more effective structure for educational and vocational guidance and counselling services; the relevance of creating training and re-training schemes aimed at unemployed women or employed women who need to develop new skills due to technological development, etc. The workshop created a «Group of Studies on Gender and Technical Education» as a mechanism to deal with gender issues in technical and vocational education, which will actively participate in seminars, conferences and workshops already being organized in various states, to join a number of national associations with the intention of creating room for debate on issues concerning girls and women in technical and vocational education and to join the Network of Gender Studies (REDEFEN) which is a database system providing information on gender-related issues.

PROFILE OF A UNEVOC CENTRE

The Organization for Vocational Education and Training (OEEK) in Greece

Taking into account the increasing internationalization process of commerce and the labour market, as well as rapid technological evolutions and demographic problems, a new National System of Vocational Education and Training was established in Greece in 1992. The system, aims to meet the urgent needs in the field of the post-secondary vocational education and training through the establishment of Institutes for Vocational Training and to provide the society with manpower with modern qualifications.

The Organization for Vocational Education and Training (O.E.E.K.), is an autonomous legal entity of public law, supervised by the Ministry of National Education and Religious Affairs, and is responsible for the planning, management and supervision of this system. The state and the social partners are also represented on its Management Board.

The tasks of the Organization include: identification of the needs for specialized personnel in each sector of the economy; propose national policy on Vocational Education and Training; recognize professional credentials of graduates at all levels (except higher education); publish a national list of the recognized professions, certify the titles granted by other Greek entities of vocational education and training and to grant the equivalence of degrees awarded abroad; supervise the Institutes for Vocational Training and private institutions; carry out research projects and studies; maintain statistical data and establish a documentation system for vocational education and training; etc.

The Organization was designated as the Greek UNEVOC Centre by the national authorities in 1994.

For more information, please contact the Directorate of European Communities and International Organizations Programmes, OEEK, 1, Ilioupoleos Ave, 172 36 Imittos, Athens, GREECE. Tel: (30-1) 97 10 502, Fax: (30-1) 97 30 245.

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